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Insurance Investments
Sherwin C. Badger, George T. Conklin, Jr., Marshall D. Ketchum, H. G. Fraine, Harry L. Severson

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Reappraisal of the Easy Money Policy
Henry C. Murphy, Lester V. Chandler, Howard R. Bowen

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The Journal of FINANCE

Vol. VI JUNE 1951 *No. 2*

INSURANCE INVESTMENTS

UNUSUAL FEATURES OF LIFE INSURANCE INVESTING*

SHERWIN C. BADGER
New England Mutual Life Insurance Company

THE TITLE OF MY TALK today is "The Unusual Features of Life Insurance Investing." I suspect that most people who are not directly connected with investing life insurance funds would say that the chief characteristics of such investing is that it is stereotype. They have a vague idea that it is greatly restricted by law, that life companies hold nothing but the giltest of gilt-edged securities, that their investment policies are guided by the stodgiest, ultra-conservative ideas of trusteeship.

Maybe those were the characteristics of life insurance investing many years ago, but they certainly are not today. Both the laws governing life insurance and the practices of the companies have moved with the times. Today the investing of the enormous sums flowing to life companies is anything but a narrow and circumscribed job; instead it is a fascinating career involving a constant search for new ways to meet new needs not only of the life insurance companies, but of the American economy.

The particular things I want to stress may sound self-evident, but I believe they are not generally appreciated. Life insurance investing is unique. Its opportunities, its objectives, and its methods differ greatly from those of almost all investors, whether institutional or personal. One of the members of the finance committee of my company, a man with a broad and distinguished business record, has told

* This article by Sherwin C. Badger and the following two articles by George T. Conklin, Jr., and Harold G. Fraine, with discussions by Marshall D. Ketchum and Harry L. Severson, were presented at a joint session of the American Finance Association, the American Statistical Association, and the American Association of University Teachers of Insurance in Chicago on December 27, 1950. The general subject discussed at the session was "Insurance Investments." The program was under the chairmanship of James J. O'Leary, Life Insurance Association of America.

me many times that the most difficult thing for him when he comes to our meetings is to be sure he has put on the right mental jacket. He says he keeps forgetting that he is not sitting on the trust committee of the bank of which he is a director, he is not passing on the investments of his alma mater, he is not looking after his personal funds—instead he is investing for a life insurance company. What he considers to be axioms for some of these other investment problems may not be axioms at all for the life company; what might seem risky or inappropriate for a personal trust fund may well be sound and appropriate for his life company.

Now why is life insurance investing unique? Ask yourselves what other type of investor has the following combination, and I stress the word combination, of characteristics.

First, a life company is truly a long-term investor, because its liabilities are long term also.

Second, its cash inflow practically always (the exceptions are very rare) exceeds its cash outflow.

Third, it retains the bulk of its investment income and re-invests it at compound interest.

Fourth, its investment decisions are not significantly influenced by income tax considerations.

Let me elaborate. First, as to the long-term nature of the business. The contractual liabilities of a life company extend for the most part over the lifetime of the policyholder. To an increasing extent, they extend as well over the lifetimes of the beneficiaries. Its investments, therefore, can be and usually are long term in nature. In spite of all the corporate refinancing of recent years, there are still on the books of my company many securities acquired more than fifty years ago—indeed I know of one security we acquired in 1844 and held for 101 years.

Second, as to the cash flow. Cash income and outgo differ markedly from bookkeeping figures of income and payments. For example, when an insured person dies, the beneficiaries often elect to leave the proceeds of the policy with the company. Thus though the benefits from the policy are recorded on the books as having been paid, the funds remain with the life company and no cash outflow occurs.

The statement I made a moment ago that cash inflow practically always exceeds cash outflow may astonish you. The record, however, substantiates it. A most revealing study of this subject was made by the Association of Life Insurance Presidents in the 1930's. It covered forty-five life companies holding a little more than 84 per cent of the assets of all United States legal reserve companies. Hence, it is repre-

sentative of the business as a whole. The results were summarized in an address before that Association on December 3, 1937, by Mr. John R. Hardin, who was then president of the Mutual Benefit Life Insurance Company of New Jersey. This showed that in the two worst depression years, 1932 and 1933, the cash income of these forty-five companies was approximately double the cash outgo. Cash received on account of premium income exhibited remarkable stability, falling from a peak of $2.5 billion in 1931 to a low point of only approximately $2.2 billion in 1933. This stability can be attributed to the fact that with most families the payment for life insurance protection is one of the last items to be dropped from the family budget. Cash income from interest, dividends, and rents also remained almost constant during this trying period—a tribute to the broad diversification of investments and to their quality.

On the outgo side there was more fluctuation. This was due largely to a rapid expansion of payments made on account of surrendered policies. Total cash payments rose from about $1.1 billion in 1930 to a little over $1.5 billion in 1932, which marked the peak.

It is an extraordinary fact that throughout this period of economic and financial stress these same life companies received in each of the depression years nearly a billion dollars in cash from maturities and repayment of loans plus a small amount from securities disposed of through sale. As a result of the excess of cash inflow from normal operations together with the repayment of investments, these companies were able to make new investments of more than $2 billion in every one of the depression years.

Part of these new investments were in the form of cash policy loans which expanded very rapidly as the depression deepened. This demand for policy loans was handled by most companies by the simple expedient of slowing down the volume of other types of new investments.

It is of course true that there were some life companies that did have to liquidate securities during the depression years and there were a few that got into financial difficulties. These, however, were the exception rather than the rule. The over-all statement is still true that even in severe depressions the cash income of a well-managed life insurance company exceeds its cash outflow.

One other feature of cash flow should be mentioned and that is its predictability. Cash income from normal operations can be forecast with great accuracy. Cash outflow cannot be forecast as closely, but it is still predictable within limits that are of practical use. The reason is, of course, that life insurance is held by many millions of people,

from all walks of life and in all parts of the country. They do not all do the same things at the same time, hence changes of trend are observable long before a crisis is reached.

A dramatic example of this is the experience of my own company during the stock market crash of 1929. Policy loans started an uptrend early in 1928 and in the spring of 1929 began to rise sharply, presumably because many people were borrowing to speculate in stocks. In May of 1929 the then financial vice-president of my company decided that he did not like the trend and that the company should start preparing for a possible severe cash drain. The company therefore stopped making new investments. The cash drain came with a vengeance in the October-November stock market crash. In October net cash policy loans rose from around $500,000 to nearly $1 million, and in November the figure was nearly $2 million. This unprecedented cash drain was met easily from the accumulation of excess cash income during the five preceding months—in fact the vice-president has since remarked that he made a bad mistake by preparing at least three months before it was necessary!

The demonstrated reliability and predictability of the flow of cash very obviously influence investment policy as to liquidity, as to what is bought and when. Also, cash flow is a major factor that should be considered in the valuation of life insurance investments.

Take the matter of liquidity. There are some who feel that a life insurance company should, like a bank, have a primary reserve of highly liquid short-term government paper, and that its portfolio should have staggered maturities. A good many of us in the business question this. We believe that the experience over the past several decades has demonstrated clearly that liquidity for a life company comes not from its ability to market its assets quickly, but rather from the inherent nature of its business and its resulting cash flow. Indeed, if there be any need for liquidity in the usually accepted meaning of the term, it is now amply supplied by the considerable volume of government bonds now held by most life companies. Under the revised banking laws, these bonds can be discounted by life companies at the Federal Reserve Banks to meet an emergency.

As most of you probably know, in the past few years life companies have been acquiring an expanding volume of bonds, notes, and preferred stocks by what is known as direct placement, which Mr. Conklin will discuss in detail. Many people, without full knowledge of the facts, have wondered whether this may not be a dangerous practice. "Why," they say, "these securities haven't any market, you can't sell them. You're locked in until they mature." But if there's no reason-

able likelihood that there will be any necessity to liquidate these direct placement securities, why should they cause any more concern than the ownership of real estate mortgages? Mortgages have no ready market either. Yet the ability of life companies to weather the storm of the 1930's was in no way imperiled by the fact that they entered the depression with more than 40 per cent of their assets (about double the present percentage) invested in their mortgage portfolios.

Another way in which the reliable cash inflow is important in the formulation of investment policy is that it permits "averaging." Money is available for new investing in bad years as well as good, when prices are low as well as when they are high. There is no need to elaborate on this point, for you are all familiar with the excellent results that can be obtained by those who are fortunate enough to have a constant flow of new savings for investment.

Perhaps I should mention one thing that might change the historical pattern of life insurance income and outgo. It is conceivable that if atom bombs should be dropped in this country, the life companies would be subjected to a double strain, a sharp rise in death claims on the one hand, and destruction of some of their investment assets on the other hand. My answer to this possibility is perhaps an evasion. It seems to me that if death claims should suddenly mount to a level that would require mass liquidation of securities, then there probably would be no market even for the highest-grade listed and actively traded bonds. Since life insurance companies, and similar types of savings institutions, are practically the only buyers of corporate bonds today, it is difficult to conceive who could be buyers in sufficient quantities if these institutions had to turn into large-scale sellers. In short, I do not believe that there is any known mechanism to maintain a liquidity which could withstand disaster of the magnitude I have mentioned but which we all hope will never come to pass. Under such circumstances it seems to me a moratorium would be inevitable.

I am not going to discuss why I think cash flow is so important in the valuation of life company assets because I know Dr. Fraine will cover the subject far better than I could. I will say, however, that I feel strongly that year-end market quotations are utterly inappropriate as a criterion for valuation of any of the income-producing assets of life companies. These investments were acquired to produce income. They were not acquired like merchandise inventories, for the distinct purpose of resale; nor, like short-term government securities, to serve as a reserve to meet unexpected emergencies. These invest-

ments are just as much the fixed capital of life companies as the mines, railroads, and plants of U.S. Steel represent its fixed assets. Think of the raised eyebrows among accountants, investors and the SEC if U.S. Steel should start writing up, or writing down, its capital account each year according to the vagaries of quoted prices for real estate and machinery!

I should like to go back to the third point I mentioned at the start of my talk, namely, that life company investment income is largely retained and reinvested at compound interest. I cannot overemphasize the significance of this. Very few of us think in terms of compound interest and we forget that $1.00 left at compound interest at 3 per cent accumulates to $2.00 in about 23 years, which is a short time in life insurance calculations. This means that while the preservation and safety of original principal is important, it is by no means the only consideration for a life insurance company. The reliability of income and the rate of income becomes increasingly more weighty as the years go by.

Let me give you an example which may sound exaggerated, but is nevertheless true. One of the first three investments made by my company happened to be the common stock of a corporation which at that time was still in the blue-print stage. This corporation ultimately went into receivership and my company sold the investment 101 years later and took a 57 per cent loss on principal. But during our 101 years of ownership, we received dividends totaling 839 per cent of the original investment and most of this income was retained and reinvested. Put another way, even though the investment went very sour and involved an ultimate capital loss of 57 per cent, we received an average annual return during our 101 years of ownership equal to 77 per cent. Thus income can be very much more important than the preservation of original principal.

I would like to give you another illustration which perhaps is a little more practical. As you know, the decade of 1930 was catastrophic to the finances of most of the railroads in this country. One hundred and nine railroads representing 33 per cent of the mileage in the nation were in receivership at the end of the decade. Railroad credit received a blow from which it has not yet recovered—indeed you will still find plenty of investors who say they would not touch a railroad security with a ten-foot pole.

You may be interested in what this period of adversity did to the rail portfolios of life companies. The figures I shall quote are based on a study by the Investment Research Committee of the Life Insurance Association of America of the eighteen largest life companies

from 1928 through 1949. These companies started the period with railroad bond holdings totaling about $2.6 billion, and at the end of 1949 their holdings were about the same, $2.7 billion. Capital-wise the rail portfolio took a bad beating, for these companies reported accumulated net capital losses during the period of nearly $153 million, a tidy sum.

But let us look at the results in true perspective. Although, as mentioned, they absorbed net losses of $153 million, the income they received on these rail bonds during the period amounted to nearly 15 times as much, or to $2.3 billion. Thus, even after absorbing all these losses, the cumulative net annual rate of return on their railroad bond portfolio was 3.74 per cent. The capital losses averaged only 0.27 per cent per year, a surprisingly small figure when you remember what happened in the railroad field during the past twenty years.

The proof of the pudding that income and its retention is all important in life insurance investing can be shown from another comparison of the experience of these eighteen companies. You will remember I said that the average annual capital loss on railroad bonds was 0.27 per cent. By contrast, these same companies showed an annual average capital gain of 0.26 per cent in public utility bonds, of 0.24 per cent in industrial bonds and of 0.22 per cent in United States government bonds. Yet the over-all net result of income plus or minus realized capital losses shows that the railroads, far from being the worst investment, were close to the top. The net over-all accumulated average annual rate of return was highest for utilities, 3.86 per cent, rails came next at 3.74 per cent, industrials were well down at 3.41 per cent and government bonds were a poor last at 2.74 per cent. If the income receipts had been figured at compound instead of simple interest, I venture to say that railroads would have made the best showing of all.

Now by this I do not for a minute wish to infer that the way to invest life insurance money is to buy poor quality securities carrying high rates of interest. Investment standards cannot be neglected or be given second place. What I do want to emphasize is that the retention and compounding of income is much more important a factor in over-all results than is generally appreciated, that it can overcome many inevitable errors in investment judgment and many losses resulting from unpredictable events.

There is not time today to go into the details of the significance of federal income taxes on life insurance investment policy. As many of you know, about nine-tenths of investment income for the companies as a whole is needed to build up policy reserves as calculated by the

actuaries. This part of investment income is treated by the Internal Revenue Department as an expense item. Hence, only about one-tenth of total investment income is subject to federal income taxes. Obviously this tax factor is not a major determinant of investment policy, which is in sharp contrast to the situation in personal and many other types of investing.

Now what are some of the conclusions that may reasonably be reached from these special characteristics of life insurance investing that I have sketched. The more I study the subject, the more strongly I come to one fundamental conclusion. It is that the mechanism and structure of life insurance was so marvelously designed by the pioneers of the business a century or more ago and has since been so improved in countless ways that it offers a vehicle for investing that is close to impregnable and yet is remarkably flexible.

At a recent life insurance meeting, someone facetiously remarked that it would take a man of unbelievable incompetence or of diabolical cleverness or outright crookedness to ruin a life company, and that in a few cases such men had succeeded in breaking a company. That is an overstatement, of course, because the business is not foolproof. What I should like to emphasize, however, is that the investing of life insurance funds, whether measured in millions or billions, is not dependent upon financial geniuses—and that is a fortunate thing. What is required of investment management is sound technical knowledge, experience, common sense, and reasonable judgment, and, of course, unquestioned integrity.

I would like to add one other quality which I believe is desirable in those who guide investment policy, and that is imagination. It seems to me the basic characteristics of life insurance investing offer great opportunities for widening our horizons as to new ways life insurance funds may most usefully be employed for the good of the whole nation. If life insurance is to meet its share of the critical challenges of today and tomorrow, we must fully understand the marvelous tools that have been put at our disposal, and we must have the courage to use them to their full effectiveness.

DIRECT PLACEMENTS

GEORGE T. CONKLIN, JR.
The Guardian Life Insurance Company of America

THE IMPORTANCE OF DIRECT placements as a method of distributing corporate bond issues is attested to both by the fact that such issues in the last ten years have totaled almost $15 billion, and by the fact that discussion of the problems raised thereby has consumed many thousands of pages of testimony before legislative committees, state and federal. This paper, after consideration of a definition of direct placements, will give some brief historical data and some current factual data, and will then treat some of the more important economic aspects of this method of distributing securities. An attempt will be made to view the situation from the objective viewpoint of an economist rather than from the interested viewpoint of an investment man.

DEFINITION

For the purpose of this paper a direct placement (often called private placement) will be considered as an issue of securities with a maturity of over five years and usually ten years or longer, the terms of which are negotiated directly between the borrower and the lender, with or without the aid of an intermediary, and title to which passes directly from the borrower to the lender. The important points of contrast with the publicly underwritten issue are: (1) the negotiation of the terms, in which negotiation the lender plays a very significant part contrasted to the publicly underwritten security in which the lender plays no direct part, and, (2) the direct passage of title from the borrower to the lender, as contrasted to the underwritten issue in which the title passes first to the underwriter and then to the lender.

HISTORY OF DIRECT PLACEMENTS

Most people associate direct placements with the passage of the Securities Act of 1933 which provided that security issues offered to the general public had to be registered with the SEC and a registration statement filed therewith, whereas issues in which there was no offering to the general public (hence called private) did not have to go through the registration process. Actually, however, as Fraine has pointed out, from 1900 to 1933 there was no year in which there were no direct place-

ments; in several years such issues amounted to more than 10 per cent of the volume offered publicly and in one year amounted to more than one-fifth of such volume.[1]

Adequate data on direct placements dates from the collection by the SEC of such data beginning in 1934; prior to that time the statistics are very limited and probably understate the amount of such financing.

Since 1933 direct placements have grown substantially in volume and as a percentage of total offerings. In 1948 and 1949 such issues totaled $3,008,000,000 and $2,453,000,000 respectively, and amounted to over 50 per cent of all corporate bond issues. The table below gives the relevant data from 1934 to date.

TABLE 1

A Seventeen-Year Summary of Corporate Bonds* Publicly Offered and Directly Placed in Each Year—1934 through 1950—by Calendar Year

(Millions of dollars)

Year	Total Offerings	Publicly Offered	Placed Directly	Percentage of Total Placed Directly
1934.....	372	280	92	24.7
1935.....	2,225	1,840	385	17.3
1936.....	4,029	3,660	369	9.2
1937.....	1,618	1,291	327	20.2
1938.....	2,044	1,353	691	33.8
1939.....	1,979	1,276	703	35.5
1940.....	2,386	1,628	758	31.8
1941.....	2,389	1,578	811	33.9
1942.....	917	506	411	44.8
1943.....	990	621	369	37.3
1944.....	2,670	1,892	778	29.1
1945.....	4,855	3,851	1,004	20.7
1946.....	4,882	3,019	1,863	38.2
1947.....	5,036	2,889	2,147	42.6
1948.....	5,973	2,965	3,008	50.4
1949.....	4,890	2,437	2,453	50.2
1950†.....	5,206	2,966	2,240	43.0

* Bonds, notes, and debentures.

† Preliminary figures estimated on basis of figures through July, 1950.

Source: Financial Analysis Section, SEC.

Direct Placement by Type of Industry

The significance of the statistics on the total volume of direct placements compared to offerings is reduced considerably by the fact that there is such a wide variation from one industry to another (see Table 2). Consequently, the change in the percentage of direct placements to

1. H. G. Fraine, "Direct Sale of Security Issues," *Journal of the American Association of University Teachers of Insurance* (March, 1949), pp. 40–42.

total bond offerings from one year to another or over a period of years may merely reflect a changed composition of security offerings rather than a basic tendency toward or away from direct placement.

Comparable statistics covering total corporate bond offerings by industry and direct placements of bonds by industry over a period of years are not presently available, and constitute a serious gap in direct placement statistics. However, based upon piecing together available information for 1948 and 1949, direct placements would appear to comprise approximately 25 per cent of public utility bond offerings, less than 1 per cent of railroad bond offerings and perhaps in excess of 85

TABLE 2

ALL PRIVATE PLACEMENTS CLASSIFIED BY MAJOR INDUSTRY
(Estimated 1934–50 Gross Proceeds in Millions of Dollars)

Year	Total	Utility	Industrial and Miscellaneous	Railroad	Financial and Real Estate
1934	92	48	42	1	0
1935	387	152	194	4	37
1936	373	218	105	16	34
1937	330	61	244	20	5
1938	692	299	384	8	1
1939	706	457	144	20	85
1940	765	391	289	9	112
1941	813	438	271	20	64
1942	420	190	223	6	2
1943	372	101	230	39	2
1944	787	297	392	91	6
1945	1022	290	682	21	29
1946	1917	325	1408	35	149
1947	2235	529	1541	1	164
1948	3087	636	1972	5	473
1949*	2502	976	1099	2	425
1st 6 mos. 1950*	1122	454	390	10	267

* Not strictly comparable with figures for 1948 and prior years due to some reclassification.

SOURCE: Financial Analysis Section, SEC.

per cent industrial and miscellaneous bond offerings. There appears to be wide variation also within the public utility field; thus in the case of electric companies direct placements comprise less than 20 per cent; gas, reflecting the high percentage of direct placements in natural gas transmission companies, 55–65 per cent; telephone, less than 5 per cent; transportation other than railroad, almost 100 per cent. One possible partial explanation for the higher percentage of total bond offerings accounted for by direct placements in 1948 and 1949 compared to prewar years is the greater relative importance of industrial issues in total offerings for those years.

Direct Placement by Type of Security

The overwhelming preponderance of direct placements is in corporate bonds; in 1948, for example, almost 98 per cent were bonds, slightly less than 2 per cent were preferred stocks, and a negligible fraction were common stocks (see Table 3). Direct placements may therefore be considered a debt phenomenon as of today, and only direct placements of bonds are considered in this paper.

TABLE 3

All Private Placements Classified by Type of Security
1934–50
(Estimated Gross Proceeds—Millions of Dollars)

Year	Total	Debt Issues	Pfd. Stock	Common Stock
1934	92	92	0	0
1935	387	385	2	0
1936	373	369	1	3
1937	330	327	3	0
1938	692	691	1	0
1939	706	703	3	*
1940	765	758	2	5
1941	813	811	1	1
1942	420	411	9	0
1943	372	369	0	3
1944	787	778	7	2
1945	1022	1004	11	7
1946	1917	1863	42	12
1947	2235	2147	79	9
1948	3087	3008	60	19
1949	2502	2453	49	
1950†	1122	1107	14	

* Less than 500,000.
† First six months.
Source: Financial Analysis Section, SEC.

Direct Placements by Type of Lender

The life insurance companies completely dominate the direct placement field accounting for over 90 per cent of such issues in each of the last several years. Banks are next in importance, accounting in 1949 for slightly less than 5 per cent, and private pension funds are next with somewhere in the neighborhood of 2–3 per cent. Insurance companies, other than life, and all other institutions accounted for less than 1 per cent in 1949. Table 4 gives the relevant available statistics.

Importance of Direct Placement in Investment Portfolios of Life Insurance Companies

Direct placements are of great importance in life insurance investment portfolios. The investment research staff of the Life Insurance

Association of America has compiled data concerning the holdings of twenty-eight life insurance companies, including the twenty-two largest, which shows that direct placements accounted for 53.5 and 55.8 per cent of total corporate bond portfolios in 1948 and 1949 respectively. Moreover, in the year 1949, approximately 72 per cent of the corporate bond acquisitions of these companies were direct placements.

TABLE 4

CORPORATE BONDS PLACED DIRECTLY
(Percentage of Total Amount Purchased by Various Investors)

Type of Investor	1940	1941	1942	1943	1947	1949
Life insurance companies	88.1	93.4	94.8	91.9	93.0	90.5
Other insurance companies	.1	.2	.....	.5	.1	.4
Banks	11.2	5.9	4.8	6.2	2.7	4.9
Other institutions	.5	.5	.4	.8	2.5	.5
Individuals and corporations	.1	.1	.....	.7	.4	3.6†
Unknown	*	*	*	*	1.3	.1
Total	100.0	100.0	100.0	100.0	100.0	100.0

* Figures for the years 1940–43 were taken from work sheets prepared some years ago and the distribution apparently did not cover a small number of issues where identity of purchasers was unknown. This probably does not seriously impair the use of the figures, however.

† The increase in 1949 largely reflects purchases by private pension funds which are included in this category.

SOURCE: Financial Analysis Section, SEC.

TABLE 5

CORPORATE BONDS
COMBINED PORTFOLIOS
28 LIFE INSURANCE COMPANIES
(Millions of Dollars)

	DIRECT		NON-DIRECT		TOTAL	
	Amount	Per Cent	Amount	Per Cent	Amount	Per Cent
			December 31, 1949			
Railroad	$ 260.5	9.5	$2,477.7	90.5	$ 2,738.1	100.0
Utility	3,451.1	40.6	5,050.8	59.4	8,502.0	100.0
Ind. & misc	7,210.9	86.5	1,124.7	13.5	8,335.6	100.0
Total	$10,922.4	55.8	$8,653.2	44.2	$19,575.6	100.0
			December 31, 1948			
Railroad	$ 258.3	9.4	$2,496.1	90.6	$ 2,754.5	100.0
Utility	3,011.0	39.5	4,621.3	60.5	7,632.3	100.0
Ind. & misc	5,978.4	86.7	915.1	13.3	6,893.4	100.0
Total	$ 9,247.7	53.5	$8,032.5	46.5	$17,280.2	100.0

NOTE: Valuation basis is cost, not book value. Components may not add to totals due to rounding. Percentages were computed from unrounded figures.

SOURCE: Life Insurance Association of America.

REASON FOR GROWTH OF DIRECT PLACEMENT

A great many people have felt that direct placements were caused largely by the registration process necessary for public offerings under

the Securities Act of 1933. They reason that the high cost of registration, the civil and criminal liabilities connected therewith, the red tape, inconvenience, and delay caused by registration have led corporate management to avoid registration by direct placements of securities.

While it is true that the passage of the Securities Act of 1933 with its exemption for direct placements in all probability gave impetus to this method of financing, it is my opinion that much more fundamental economic forces are responsible for its subsequent growth. This is a conclusion which has also been reached by Fraine in his paper before

TABLE 6

DETAIL OF COST OF FLOTATION OF BONDS AS A PERCENT OF GROSS PROCEEDS
(Three years, 1945–47)

Detail of Costs	Per Cent of Gross Proceeds
Total cost of flotation	1.43
Commission and discount	0.88
Other expenses	0.55
Detail of other expenses:	
Not affected by registration	0.27
Exchange listing	0.01
Federal revenue stamp taxes	0.09
State fees and taxes	0.03
Trustees, transfer agents, etc.	0.14
Partly affected by registration	0.27
Printing and engraving	0.13
Legal fees and expenses	0.08
Accounting fees and expenses	0.02
Miscellaneous	0.03
Entirely attributable to SEC registration	
SEC registration fee	0.01
Number of flotations	135

SOURCE: Survey of American Listed Corporations. *Cost of Flotation*, 1945–47 (Washington, D.C.: Securities and Exchange Commission, February, 1949).

this group two years ago, by Wilde in his paper given in October this year before the American Life Convention, and by Corey in his article in the November issue of the *Harvard Business Review*.

The additional costs of offering a security publicly which can be traced to the registration requirements of the Securities Act of 1933 are but a small part of total distribution costs. The latest statistics available on this question are contained in a study of the SEC entitled, *Cost of Flotation, 1945–1947*, published in 1949. Table 6 below clearly brings out these facts. Thus, for the three-year period 1945–47, of total flotation costs of 1.43 per cent of the gross proceeds of 135 bond issues, costs of flotation attributable entirely to registration amounted to only 0.01 per cent; expenses partly attributable to registration amounted to 0.27

per cent, and expenses not affected by registration amounted to 1.15 per cent. Thus, over 80 per cent of the cost of publicly offering a bond was accounted for by costs not affected by registration. It must be quite clear, therefore, that the avoidance of the expense of registration is not a major factor in leading corporations to finance privately. Other costs of distribution which can be saved by direct placement are far more important; for example, underwriting commissions and discounts which amount to more than 60 per cent of the total flotation costs can be materially reduced or even eliminated in direct placement.

The other disadvantages of registration mentioned above, namely criminal and civil liabilities, delay, and red tape may be of controlling importance in isolated cases but, in general, they are not of decisive importance in connection with bond financing. In the 1941 congressional hearings on a proposed amendment to the Securities Act to require registration for all direct placements over $3,000,000, the SEC took the position that such a requirement was not necessary because the large lender did not need the protection, and because it would not in their opinion reduce the volume of direct placements.

There are a number of fundamental economic forces which led to the widespread development of direct placement, and they are all interrelated. The first such development was the changed supply-demand relationship in the market for corporate bonds. Up until the early 1930's the supply of private debt increased more than enough to take care of investment requirements of institutional investors. Corporate long-term debt reached a peak just before the passage of the Securities Act of 1933, and declined steadily thereafter until the expansion in debt following World War II. While corporate debt was declining about $10 billion, insurance assets were increasing about $30 billion. Moreover, since the normal outlet for bank assets, namely bank loans, had declined considerably, the demand on the part of banks for corporate bonds increased. Thus, a complete reversal of the supply-demand picture took place almost coincident with the passage of the Securities Act of 1933. At the same time institutional investment interest in industrial bonds increased markedly; prior to the thirties insurance companies invested relatively little in industrial bonds; during the thirties, insurance companies began to invest considerable sums in such bonds. This was the result of several factors; in the first place the whole railroad bond field, which had been the primary bond investment medium for insurance investment, fell into disrepute as a result of the experience of the 1932 depression; secondly the investment repute of industrial bonds increased during the thirties, and they became a natural outlet for institutional funds; lastly the New York Insurance Law was amended in

1928 to allow insurance company investment in unsecured corporate obligations, which greatly facilitated the investment of the large New York companies in industrial bonds. This was a significant development because, as has been pointed out, direct placements are most important relatively in the industrial field.

As a result of this basic change in the demand-supply relationship affecting corporate bonds, and as a result of government fiscal policy interest rates sharply declined. This decline in interest rates coupled with the taxation policy of the federal government had two very important results which had considerable influence on the development of direct placements. Corporate borrowers turned heavily toward financing their capital needs by issuing bonds. Not only was equity financing difficult, but it was extremely expensive when compared to bond financing at low interest rates, with interest a deductible item for income taxes. At the same time individual investors who had been heavy investors in corporate bonds during the twenties found them increasingly unattractive due to the lower interest rates and high personal income taxes. Consequently, the individual largely dropped out of the corporate bond market; this was largely the result of his being priced out. The low yield on bonds, particularly after income taxes, was insufficient to attract him, and he turned to the tax-exempt municipal market. This interest of the individual investor in the municipal market, coupled with that of corporate investors and trust funds, in turn priced the insurance companies, who derived little benefit from tax-exempt securities, out of the municipal market and heightened their interest in the corporate bond market. When all these factors are put together I believe we have the real forces which led to direct placements.

Effects of Direct Placement on the Functions of Investment Bankers

In the twenties and prior years, insurance companies and banks were far from a dominant influence in the corporate bond market; the supply of investment outlets was more than ample to take care of their needs and there was no real investment problem. Interest rates were relatively high, and income taxes relatively low, consequently the individual was interested in corporate bonds for investment. The small investor thus was a very important part of the market, and almost any issue of corporate bonds had to be widely distributed in order to secure its success. This meant that investments had to be "sold," and a large sales force was essential. The developments outlined above changed all this; with the decline in suitable investment outlets there arose a serious investment problem for institutional investors. They became hungry for

bonds, and their greatly increased investment funds enabled them to more than supply total corporate debt requirements. Thus, the success of any issue of corporate bonds no longer required widespread distribution; it could be distributed to a few institutional investors, who were eager to secure the opportunity to invest large sums in a qualified issue. Not only was a widespread distribution of bond issues unnecessary to their success; it would have been highly impractical, because the small investor was no longer interested in such issues. Consequently, investment quality bond issues largely "sold" themselves. There was literally no real "selling" problem. Is it any wonder that a distribution mechanism which was appropriate to the conditions of the twenties and prior years would undergo fundamental changes when faced with the greatly changed conditions of the thirties? The key factor in bond distribution prior to the thirties was the underwriter. Four functions might be enumerated: (1) to provide the contact between the borrower and the lender, (2) to serve as consultant to the borrower, to advise him concerning his financing problems in general and on the terms of any particular bond issue, (3) to provide a degree of protection for the small investor, (4) to employ a large force of salesmen to distribute the securities.

Now what functions would it have been logical to expect to change? Certainly it would be logical to expect a change in (4), likewise in (3), and to some extent in (1). Direct placement reflected these changed needs and functions. On the other hand consider the fields where these changed conditions do not apply—where the small investor has an interest and in which his buying power is important—such as for example, municipal bonds and stocks, particularly common stocks; here direct placement is at a minimum and the underwriter is important in all four functions.

At this point it is worth while to note that one of the foregoing conditions has changed since the thirties; the thirties were characterized primarily by financing for refunding purposes with total corporate debt declining. Since 1945, however, large-scale financing for new capital needs has taken place and long-term corporate debt has increased sharply. That direct placement has increased in importance during this latter period is evidence of its fundamental importance.

So long as conditions approximating those now present continue, it is logical to expect that the system of distribution of investment quality bonds will continue to circumvent at least in part those functions of the underwriter which are no longer as economically necessary as they once were under different conditions. Whether or not direct placements as they are defined in this paper constitute the ultimate answer to the

changed conditions is a moot question; but some change along these lines was definitely indicated. Merely to change the law to require registration of all larger direct placements would not alter these economic forces; such a change in the law would, however, reduce the flotation cost advantage of direct placement, and reduce certain other advantages of direct placement. The net effect of such a change in the law, in my opinion, would be to curtail the volume of direct placements, but probably not seriously so.

The Small Company in Direct Placements

An opinion held in many quarters and often voiced in congressional hearings is that direct placements benefit the giant corporations and that they are not available to the small borrower, who is elbowed aside. Nothing is further from the truth. The fact of the matter is that the small borrower derives far greater advantage from direct placement of securities than does the larger borrower. Consider the position of the small relatively unknown company which nevertheless is a sound long-term credit risk. What are its alternatives when it wishes to raise money? Equity money is difficult to raise and extremely costly. This problem is so much treated elsewhere that it need not be considered further here. As to debt financing, the borrower can go to his bank and get a commercial bank loan payable on demand in sixty or ninety days or a year; such financing is not at all suited to his need for capital investment which is of a long-term nature. Such financing is as a matter of fact very dangerous to him; the bank's lending policy may change and change suddenly as a result either of changed local conditions or a change in conditions beyond its control such as Federal Reserve policy. This may cause the bank to call in the loan, or curtail any additional lending, and the businessman finds all his plans upset; if he has used the money for fixed asset investment, he may face bankruptcy; if he has used it to finance an increased sales volume, he may find it necessary to drastically curtail sales with resulting possible losses. A businessman can never safely plan over the longer term if he is relying on the continuing availability of short-term bank money. In some cases the business man may secure a term loan from his bank, repayable over a period of five years. This represents a heavy repayment and in the event of poor business conditions may cause him to default. Moreover, the availability of such term credit depends in great degree upon the availability to the bank of regular short-term commercial loans, which are and should be the basic instrument for commercial bank lending. Thus, if plenty of commercial loans are available, little or no term money will be available from the banks, and this is the situation which is apt to pre-

vail when there is great need on the part of the small business for new money.

What then about a public offering of the bonds of such a business? In the first place, this may not be a real alternative, for no underwriter may be interested in his small issue; secondly, if he can find an under-

TABLE 7

SUMMARY OF COST OF FLOTATION AS A PERCENTAGE OF GROSS PROCEEDS BY TYPE OF SECURITY AND SIZE OF FLOTATION, THREE YEARS, 1945–47

SIZE OF FLOTATION (Millions of Dollars)*	BONDS				COMMON STOCKS			
	No. of Flot.	Cost of Flot.	Comm. and Discount	Other Exp.	No. of Flot.	Cost of Flot.	Comm. and Discount	Other Exp.
Under 0.5	...	....	....	....	13	27.90	22.72	5.17
0.5– 1.0	6	8.68	5.56	3.12	51	18.65	15.48	3.17
1.0– 2.0	11	5.88	3.74	2.14	61	14.39	12.15	2.23
2.0– 5.0	39	2.92	1.65	1.28	49	10.13	8.73	1.40
5.0–10.0	27	2.16	1.12	1.04	21	7.64	6.77	0.87
10.0–20.0	32	2.02	1.31	0.70	8	7.95	7.36	0.59
20.0–50.0	41	1.58	1.07	0.51	2	8.21	7.88	0.33
50.0 and over	39	1.04	0.64	0.39	0	.....	.....	....
All sizes	197	1.33	0.84	0.49	205	10.03	8.83	1.20

* Only two bond issues under $500,000 were included in this study over the three years and are omitted because they are not considered a sufficiently large sample to be typical of the class.

SOURCE: *Cost of Flotation, 1945–47.*

TABLE 8

COST OF FLOTATION OF NEW ISSUES AS A PERCENTAGE OF GROSS PROCEEDS BY ASSET SIZE OF COMPANY 1945–47, ALL TYPES OF SECURITIES

Asset Size of Company (millions of of dollars)	No. of Flot.	Percentage Cost of Flot.	Percentage Commission and Disc.	Percentage Other Exp.
Under 1	71	16.94	14.95	1.99
1– 5	160	12.44	10.31	2.13
5– 10	108	7.77	6.46	1.31
10– 20	105	5.09	4.02	1.08
20– 50	98	3.09	2.33	0.76
50–100	65	2.17	1.56	0.61
100–200	46	1.89	1.39	0.50
200–500	30	1.46	1.04	0.41
500 and over	21	1.01	0.63	0.39
All sizes	715	2.48	1.88	0.60

SOURCE: *Cost of Flotation for the Years 1945–47.*

writer, the cost of a public offering will be very high, often prohibitively so. And the smaller the issue, the higher will be the percentage cost of public distribution. Tables 7 and 8 will illustrate this point.

Tables 7 and 8 contain data covering approximately 90 per cent of

the securities offered for cash sale to the public through investment bankers. The first important point to note is that there were only two bond issues under $500,000 and only eight under $1,000,000. This in itself is an indication that the public market is not a real alternative for the small borrower or the small issue. Secondly, it can be seen that for six issues between $500,000 and $1,000,000 the cost of flotation amounted to 8.68 per cent of the gross proceeds. This is a very high cost indeed; translated into interest rate cost, it would mean that a small issue which might command a rate of 4.00 per cent from the investing public would actually cost the borrowing company somewhere in excess of 5.00 per cent, or an increase of over 25 per cent in his effective interest cost. Compare this to the situation at the other extreme in size, namely, issues $50,000,000 and over where the total cost of flotation amounts to only 1.04 per cent as against the 8.68 per cent. When translated into interest cost on a typical issue of this size it would mean that an issue which would command a 3.00 per cent rate from the investing public would cost the borrower approximately 3.06 per cent. Thus, the additional effective interest cost to the small borrower was approximately 1.12 per cent, as against 0.06 per cent for the large borrower. This is a striking difference.

In the face of this high cost of public offering for the small borrower and the small issue, it would be logical to expect the small borrower to turn a hopeful glance toward direct placement in the hope of securing necessary financing on a basis suited to his needs.

What would a small issue like this cost the borrower in the way of flotation expenses if he were to sell it directly. Unfortunately, no statistics are available on this subject. From my own experience, however, I have seen issues of $500,000 or less which have been floated directly at a cost as low as one-half of 1 per cent, and I have seen such issues placed at a cost as high as 2 per cent. Undoubtedly, in some instances the costs may have been higher than this. But in any event I do not think that it can be seriously questioned that direct placement drastically reduces the cost of flotation of a small issue when compared to a public offering. This is definitely not true in the case of the very large issue; in the example cited above if all the costs of public flotation were to be saved by direct placement, it would only have saved 0.06 per cent on the interest cost, and the actual theoretical saving is nearer 0.03 per cent.

What then is the statistical evidence to support the foregoing conclusions? There is certain evidence available. In the first place, based upon the study of Ebasco Services entitled "Analysis of Public Utility Financing, 1949," we made a tabulation of the public utility bond issues

offered in 1949 by size of issue and method of distribution which reveals that all of the small issues go directly, and as the size of the issue increases a larger and larger percentage goes through the competitive bidding process. Thus, for issues $1,000,000 or less, 100 per cent went directly; whereas for issues of $10,000,000 and over only 22 per cent of the number went direct. If dollar volume is considered the same results are shown; of the total dollar volume of all issues $1,000,000 or less 100 per cent was placed directly; this percentage declines steadily with the increase in size of issue, and with those over $10,000,000 only 17 per cent of the total volume went directly.

TABLE 9

PUBLIC OFFERING OF PUBLIC UTILITY LONG-TERM DEBT SECURITIES, 1949, BY TYPE OF OFFERING AND BY SIZE OF ISSUE

(Excludes offerings by Subscription and Pipe Line Issues)

SIZE OF ISSUE (DOLLARS)	COMPETITIVE BIDDING		DIRECT PLACEMENT		NEGOTIATED PUBLIC OFFERING		TOTAL	
	No.	Per Cent	No.	Per Cent	No.	Per Cent	No.	Per Cent
1,000,000 and less....	0	0	29	100	0	..	29	100
1,000,001– 2,000,000	2	7	25	93	0	..	27	100
2,000,001– 5,000,000	21	47	22	49	2	4	45	100
5,000,001–10,000,000	28	70	8	20	4	10	40	100
10,000,001 and over...	24	75	7	22	1	3	32	100
Total.....	75	..	91	...	7	..	173	...
	Amt. (000)	Per Cent	Amt. (000)	Per Cent	Amt. (000)	Per Cent	Amt. (000)	Per Cent
1,000,000 and less....	0	..	19,700	100	0	..	19,700	100
1,000,001– 2,000,000	4,000	10	38,600	90	0	..	42,600	100
2,000,001– 5,000,000	75,900	49	71,600	46	6,829	5	154,300	100
5,000,001–10,000,000	244,500	72	64,700	19	31,723	9	340,900	100
10,000,001 and over...	688,027	77	150,900	17	56,660	6	895,600	100
Total.....	1,012,400		345,500		95,212		1,453,000	

SOURCE: Tabulation from data in Analysis of Public Utility Bond Financing, 1949—Ebasco Services, Inc.

These statistics are subject to justifiable criticism in that many public utilities are forced to go competitive either by the SEC under the Holding Company Act or by their state public utility commission. Nevertheless, an analysis of offerings reveals that there are a substantial number of instances in which the borrower is free to choose the method of distribution, and if the issue is small he tends to prefer direct placement, and if it is large he tends to favor competitive bidding.

Let us now turn to industrial and miscellaneous corporations where management has complete discretion. One of the best sources is the study made in 1948 and 1949 by E. V. Hale & Co. Table 10, taken

from this study for 1949, shows the distribution of direct placement loans by size of issue. According to this study, somewhat over one-fourth of the number of loans made were for amounts less than $500,000; 45 per cent for amounts less than $1,000,000; more than three-quarters for amounts under $3,000,000 and over 80 per cent under $5,000,000. When reference is made to volume, the picture is different, as might be expected in view of the predominance of the large size corporation in our corporate structure. Although, accounting for less than 20 per cent of the number of issues, issues over $5,000,000 accounted for about 77 per cent of the total volume.

TABLE 10

DIRECT PLACEMENT OF INDUSTRIAL SECURITIES
BY SIZE OF ISSUE

Size	Number of Loans	Percentage of Total	Aggregate Amount (000)	Percentage of Total
$1,000 to $99,999	16	4.62	$ 900	.06
$100,000 to $299,999	44	12.72	8,573	.61
$300,000 to $499,999	35	10.12	12,951	.92
Under $500,000	95	27.46	22,424	1.59
$500,000 to $999,999	61	17.63	40,184	2.86
Under $1,000,000	156	45.09	62,608	4.45
$1,000,000 to $1,999,999	60	17.34	75,346	5.36
2,000,000 to 2,999,999	45	13.00	104,392	7.43
3,000,000 to 4,999,999	20	5.78	79,350	5.65
Under $5,000,000	281	81.21	321,696	22.89
$ 5,000,000 to $ 9,999,999	28	8.09	175,403	12.49
10,000,000 to 24,999,999	23	6.65	328,403	23.37
25,000,000 to 49,999,999	9	2.60	269,561	19.18
50,000,000 and over	5	1.45	310,000	22.07
Grand Total	346	100.00	$1,405,153	100.00

SOURCE: Industrial Private Placement Loans, 1949, E. V. Hale & Co.

These figures clearly demonstrate that the small company has taken very extensive advantage of the direct placement method of floating its debt securities. On the other hand when reference is made to industrial securities of small size floated publicly, they are almost non-existent. For example, in the SEC study of *Cost of Flotation for the Years 1945–1947*, there were included only two issues under $500,000 and only eight issues below $1,000,000. Contrast these figures with the 156 direct placement issues below $1,000,000 in the single year 1949, and 223 such loans in 1948.

Figures given by Donald B. Woodward in his testimony in December, 1949, before the O'Mahoney subcommittee, and prepared by the Life Insurance Association of America, likewise confirm these findings.

This table brings out the fact that of the total number of industrial and miscellaneous direct placements made by these seventeen insurance

companies in 1948, 187 or 37 per cent of the total were made to companies having less than $10,000,000 in assets, whereas only one issue purchased publicly fell into the category. On the other hand, less than one-quarter of the number of issues purchased directly were to companies having $50,000,000 or more in assets, whereas over 70 per cent of those issues purchased publicly were in this category.

TABLE 11

DIRECT PLACEMENT AND PUBLIC OFFERINGS OF INDUSTRIAL AND MISCELLANEOUS BONDS—1948 COMBINED ACQUISITIONS OF SEVENTEEN MAJOR LIFE INSURANCE COMPANIES

ASSET SIZE OF OBLIGOR* (In thousands)	DIRECT PLACEMENTS Number	Percentage of Total†	PUBLIC OFFERINGS Number	Percentage of Total†
Under 500	3	.59	..	.....
$500 –$1,000	5	.99	..	.....
1,000 – 2,000	28	5.54	..	.....
2,000 – 5,000	78	15.45	..	.....
5,000 – 10,000	73	14.46	1	1.09
10,000 – 20,000	93	18.42	6	6.52
20,000 – 50,000	99	19.60	20	21.74
50,000 – 100,000	41	8.12	10	10.87
100,000– 200,000	28	5.54	8	8.70
200,000– 500,000	18	3.56	22	23.91
500,000– 1,000,000	0	5.94	20	21.74
1,000,000 and over	1	.20	5	5.44
Information lacking	8	1.58	..	.....
Total	505	100.00	92	100.00

* After financing.

† Do not add to total because of rounding.

Thus in my opinion, it may be safely concluded: (1) that the method of direct placement of debt securities has been of great benefit to the small borrower, (2) that he has tended to take substantial advantage of this method of financing, and (3) that he derives greater benefit from it than the larger corporations.

THE LARGE BORROWER AND DIRECT PLACEMENT

So much then for the small borrower. It has already been indicated that the large borrower derives less of an advantage from direct placement than the small borrower. However, he must still consider that it is advantageous for the alternative of a public offering is definitely available to him. What then are the reasons for his placing so many of his securities directly? There are a number of such reasons which have been offered from time to time; let us take a look at some of them. We have already dealt with the fallacy of the argument that direct placements take place to avoid the cost of registration; other aspects of registration, however, are at times of importance in determining whether an issue is

placed publicly or directly. For example, registration is a time-consuming process occupying possibly two months from the initial planning of an issue to final sale. Consequently, when speed is of the essence to meet a certain timing date, direct placement has a considerable advantage.

Likewise, when there is any uncertainty as to market conditions, direct placement also has a very distinct advantage over public offering; this is because at the conclusion of negotiations of terms the institution or institutions taking a direct placement can and will give a firm commitment, whereas in the case of the public offering the underwriter will not usually make a commitment as to price until two or three days before the actual offering. Consequently, an adverse trend in the market between the time of the conclusion of negotiation and the actual offering, after the twenty-day period, will result in a higher interest cost to the borrower. This is a risk to which the borrower is not exposed in a direct placement.

The direct negotiation between the borrower and the lender affords the opportunity for the borrower to secure terms "tailor-made" to his needs. Furthermore, he can experiment with terms which he feels he needs in the negotiation process without impairing the success of his offering, whereas in the process of public offering, if he wishes some unusual provision in the indenture, he has to commit himself to it definitely in advance, and it may cause the issue to be a failure in the market place. Undoubtedly, in certain unusual cases, this ability to bargain directly and to obtain "tailor-made" terms is important, but in the majority of cases it would not seem to be of great importance, especially as the insurance company likewise, and with more reason feels that "tailor-made" terms redound to its benefit.

Still another reason for corporate management to choose direct placement, and a very real reason is that this method of distribution is particularly adapted to situations which have some feature or features about them which are not readily understandable by the general public, or which are more or less special situations off the beaten path. Such features are much more easily explained to one or a few sophisticated investors than to the general market. Consequently, the risk margin which will have to be allowed in a public issue of this type may be considerably larger than necessary in a direct placement. Issues of the type of Shell Caribbean Oil, involving complicated problems of international exchange, are a good example, as are issues such as the Kaiser Steel and the Labrador Ore issues, which hinge primarily upon the engineer's report as to economy of the operation and its ability to operate profitably in the future.

Another type issue in which direct placement has a distinct advan-

tage is the construction project, where funds are advanced before construction is begun, as in the case of oil and gas pipe lines, bridges, toll highways, etc., and where a commitment to loan funds may extend over a period of two or three years in the future. Thus, it will be found that almost all of the new natural gas pipe lines construction projects were initially financed directly.

Another factor of importance to the borrower is the close relationship between the lender and borrower, and the consequent ability of the management to sit down with the lender at any time and discuss his problems. Thus, if the borrower's requirements necessitate a change in some indenture provision and it is a change which is justifiable in terms of the welfare of the business and the safety of the investment, such a change can be quickly and expeditiously made with relatively little cost and inconvenience to the borrower. Such is not the case, however, in a publicly distributed bond issue where the securing of assents is a costly and time-consuming process, and where often the issue will have to be called and a new one floated.

Relative Interest Cost of Direct Placements to the Large Borrower

What about the relative cost of the two methods, direct versus public offerings? Is direct placement the more economical method? It is definitely true that the cost of flotation of securities publicly is considerably greater than in direct placement. There can be no argument about this fact. The saving, as has already been pointed out is greatest for the small companies and the small issues and becomes progressively less as the size of the company and the size of the issue increases. Nevertheless, this is not the important thing; what really should matter to the borrower is the cost of his borrowed money, not merely the cost of floating the issue. Thus, he may be penny wise and pound foolish if he pays too much attention to saving $50,000 in flotation expenses by direct placement and, on the other hand, incurs an interest burden $100,000 greater than he would have if he had sold the bonds publicly. It has often been stated that in the case of direct placements, the area of bargaining between the borrower and the lender would take place within the range of the flotation cost saving that can be realized by direct placement. Thus, the yield to the lender would be greater than the yield which it could obtain on a similar issue offered publicly by some fraction of the saving caused by direct placement. In other words, the saving would be split in some fashion between the lender and the borrower.

Let us then examine this question, first by attempting to measure

this area of savings, and secondly to determine whether in actuality the bargaining is confined to this area.

Corey, in his recent article in the *Harvard Business Review*, cites an example of the comparative cost of direct placement, and competitive bidding for a $12,000,000 issue of Idaho Power bonds. Total costs for competitive bidding were $109,550, as against $39,850 for direct placement, a saving of approximately $70,000. This saving, expressed as a percentage of the principal, amounted to 0.58 per cent. This saving on a thirty-year, 3 per cent bond would have reduced the effective interest cost to Idaho Power by approximately three basis points, say from 3.00 per cent to 2.97 per cent, if in negotiation it were successful in obtaining for itself 100 per cent of the benefits of the saving, and more important still, if it were certain of getting as good a basic bid as 3.00 per cent in direct placement.

TABLE 12

ESTIMATED ITEMS OF EXPENSE IN CONNECTION WITH PUBLIC OFFERING OF $8,000,000 P.A. OF BONDS AS COMPARED WITH PRIVATE OFFERING OF SUCH ISSUES

	Public Offering	Private Offering
Underwriting fee	$ 40,000.00	.....
SEC filing fee (at $101)	808.00	.....
Federal stamp tax	8,800.00	$ 8,800.00
Fees of trustee, including counsel and authentication fees	8,250.00	8,250.00
Fees of counsel	15,000.00	10,000.00
Auditing fees	2,500.00	.....
Printing of indenture, purchase contract, etc.	5,000.00	5,000.00
Printing of registration statement, prospectus, etc.	12,500.00	.....
Engraving and printing of securities	6,900.00	250.00
Finder's fee (¼ of 1 per cent)	.....	20,000.00
Miscellaneous	5,242.00	2,000.00
Estimated totals	$105,000.00	$54,300.00

Another computation of estimated expenses, direct placement versus competitive bidding for a utility bond issue of $8,000,000, was made recently by a well-known organization in the utility field. This computation is given in Table 12 and shows a cost for public offering of $105,000 against $54,000 for a private offering, a saving of $51,000 in favor of direct placement, or 0.64 per cent of the principal amount. Again on a thirty-year bond this saving would reduce the interest cost to the borrower by approximately three yield basis points, i.e., 0.03 per cent.

In addition, data are available concerning the issuance expenses for twelve utility issues totaling $39,680,000 which were sold directly with the permission of the FPC. The total issuance cost for these twelve is-

sues was $269,868 or approximately 0.68 per cent of the principal amount. The indicated savings as against public offerings of these issues would be in line with those indicated in the previous examples, i.e., a basis point differential in the neighborhood of 0.03–0.04 per cent in interest cost.

In the case of industrial issues reliable data are even scarcer than in the case of utility bonds. In 1949, data are available for one very large industrial issue which indicates a total saving in terms of yield basis points of approximately 0.05 per cent.

The Securities and Exchange Commission now has under way a study of the comparative flotation costs of direct placements as against public offerings, by size of issue, and by industry. This will fill a much needed gap in direct placement statistics.

Based upon data available at this time, it is probable that in the case of large issues the total saving in the cost of flotation by direct placement ranges between three and six yield basis points, and in most cases, would be nearer three than six.

Now what about the bargaining process between the borrower and lender in direct placement? Will it tend to be confined to this narrow area of savings? There can be no assurance that such will be the case, unless one assumes a perfectly competitive market in direct placements. In the case where the lender and the borrower negotiate without any intermediary, such as an investment banker or broker, the advantage in such bargaining would seem to lie on the side of the lender. The investment department of the large institutional lender deals in relative interest cost and market yields every day of the year and knows the market thoroughly; the large corporate borrower, on the other hand, may not know the market as well, for it may have occasion to come into the market for a bond issue very infrequently. Secondly, if the borrower is dealing with only one or two insurance companies, he is dealing only with one segment of the market, which may or may not be typical of the whole market. For example, one company because of its mortgage investment policy might be committed well ahead, and, therefore, might be in a very good bargaining position as regards the interest rate on corporate issues; this might not be at all true of another company. Likewise, one company may differ considerably from another in its investment regard for a certain type of industry. Thirdly, except in the case of the very best issues, there is always something less attractive about an issue which has been turned down by one or more companies, so that the companies to which the issue is first submitted have a certain bargaining edge. This factor varies considerably in importance, but in some cases can be a significant factor in the bargaining process.

There is thus some reason to believe that in the process of direct negotiation, the basic interest cost arrived at, without reference to the savings effected by direct placement, may depart from the price which would be arrived at in a fully competitive market.

Where the borrower employs an investment banking institution to advise him concerning the terms of the issue in negotiation, the bargaining process approaches nearer the competitive market, but it will, to a great extent, depend upon the capabilities and diligence of the investment banking firm. This case is not much different from the position of bargaining between the borrower and the underwriter in a negotiated public offering of securities. In both cases there may be deviation from fully competitive results.

It would thus seem unusual if the bargaining process in direct placements were able to keep within a tolerance of the public offering price plus 0.03–0.06 per cent.

Let us now look to what evidence there is concerning the relative yields of direct placements versus public offerings. By the very nature of the case, there is not a great deal of evidence available, and what there is available may not be conclusive. For truly exact comparison, we would need to have the direct placement price and the public offering price for the identical issue at the same time. Unfortunately, data such as this do not exist, and, therefore, an element of judgment must necessarily enter the picture. Nevertheless, in the public utility field there are a number of cases where an issue was negotiated directly and application was made for exemption from competitive bidding which was denied and the issue therefore was sold competitively. Here, we are treating with the identical security, but the time of the negotiated price and the competitive price are different. Nevertheless, we can allow approximately for this difference in time by referring to the behavior of a market index of yields of similar quality bonds in the interval between the negotiated bid and the competitive bid. In recent years, there have been at least nine such instances involving $190,700,000 principal amount. On each of these nine issues, the competitive bid resulted in the lowest yield cost to the borrower, after taking into consideration the lower flotation cost of the direct placement. The total net savings in interest cost to the borrower for these nine issues amounted to approximately $9,200,000.00, or 4.84 per cent of the principal amount of the bonds. Treating these nine issues for illustrative purposes as one thirty-year, 3 per cent bond, Table 13 shows approximately the comparative yields and costs.

In this example, theoretically the negotiation should have taken place in the range of 3.00 per cent, the competitive rate, and 3.05 per

cent, 0.05 per cent being the saving resulting by lower flotation costs in the direct placement. Actually, however, the direct placement negotiation resulted in a basic bid which was almost twenty yield basis points higher than the competitive bid, as against a flotation cost saving of direct placement of only five basis points, leaving the direct placement cost almost fifteen yield basis points higher than the competitive bid interest cost. Here it would have been penny wise and pound foolish to concentrate on attempting to save some portion of five basis points and wind up thereby losing fifteen basis points.

This is conclusive evidence in my opinion that bargaining in direct placement is not always kept within the range of saving of flotation costs. It is not conclusive evidence that this is generally the case, but it would seem that prudent utility managements should consider twice

TABLE 13

	Competitive Bidding (Per Cent)	Direct Placement
Basic bid, i.e., price to public, or insurance company	3.00	3.196
Underwriting commissions and discounts	.037	.....*
Expenses	.035	.024
Total True Interest Cost to Borrower	3.072	3.22

* Finder's fee included in Expenses.

before financing large issues directly if interest cost was their primary consideration. It would seem further that this is true, for as already previously pointed out the great majority of large public utility bond issues are placed competitively.

In the case of industrial issues, in which at the present time competitive bidding is not practiced, management has full discretion and no exemptions are required from public authority; there are no such data available as in the utility field. Here judgment becomes much more of a factor and conclusions are more subject to error. There are an ample number of cases, however, which in my judgment definitely indicate that the bargaining is by no means always confined to the area of saving of flotation costs. I shall cite only one case, however, that of the two issues of Standard Oil of New Jersey in 1949. The first issue was for $75,000,000, twenty-five-year, 3 per cent notes and was sold directly at a price of 101 to yield 2.949. Costs involved in the direct placement amounted to $90,000 or 0.12 per cent of the principal. Thus, the net price received by the borrower after deducting expenses was 100.88, and his interest cost was 2.956 per cent. The issue was placed in January, 1949, when the Moody average of AAA bonds was at 2.70 per cent. Six months later the company sold to an underwriter for public offering

a comparable $150,000,000 issue of $2\frac{3}{4}$ per cent, twenty-five-year bonds at 100.50 to yield 2.722 to the public; the underwriters' commission and other expenses amounted to 1.01 per cent. Thus, the net proceeds to the company were $99.49, and the interest cost was 2.779 to the company. The issue was well received by the market and immediately went to a premium. At the time of the public offering, the Moody AAA bond yield was 2.67 per cent, a decline of 0.03 per cent from the time of the direct placement.

Comparing the two issues, it can be seen that the company saved a very considerable amount of flotation cost (an estimated $670,000) by placing the issue directly; yet, after reflecting the difference in the market between the two dates, the company paid almost fifteen basis points more for its money (0.15 per cent) on an issue of $75,000,000 placed directly than it did on an issue of twice the size, placed publicly six months later. This would mean an additional interest cost over the life of the direct issue of approximately $2,750,000. Had the bargaining area for negotiation been confined to the area of saving of flotation cost 0.06 per cent, it would have been confined to an area of approximately 2.75–2.81 per cent. Instead, the figure resulting from direct negotiation was 2.95 per cent, considerably outside the range. Other cases could be cited demonstrating the same point.

Competitive Bidding and Its Effect upon the Relative Economy of Direct Placements

Competitive bidding is by far the dominant method of placing debt security issues publicly today. Competitive bidding has, of course, long been the dominant factor in the municipal market. In the corporate market, the ICC required competitive bidding for equipment trust issues in 1926, and extended the requirement to other bonds in 1944; the SEC adopted Rule U-50 in 1941 requiring competitive bidding for bonds of registered holding companies and their subsidiaries; the Federal Power Commission early this year adopted a similar requirement for companies subject to its jurisdiction; an increasing number of state public utility regulatory commissions require competitive bidding, and, lastly, the Bell System has apparently adopted as a matter of policy the practice of competitive bidding without any legal compulsion to do so. Thus, industrial and miscellaneous companies constitute the only field in which competitive bidding has made no inroads.

One result of competitive bidding has been to make competition more effective in the distribution of securities, and as a result, the cost of distribution as represented by the underwriters' spread has tended to decline materially in the last ten years. A survey by the SEC covering

159 utility mortgage issues for the five-year period ended January 1, 1940, revealed an average underwriting spread of 2.49 points; only one of the 159 issues had a spread under 2 points. A similar survey covering 179 issues over the next five years showed the distribution of underwriting spreads in Table 14.

TABLE 14

Spread	No. of Issues	Amount (000)
Under 0.25	7	$ 51,500
0.25–0.50	58	683,379
0.50–0.75	69	1,480,701
0.75–1.00	21	208,411
1.00–1.25	16	421,380
1.25 and over	8	90,400
	179	$2,935,771

Another study of the SEC reveals the trend in commissions and discounts on bonds to investment bankers for the years ended June 30, 1940–49, as shown in Table 15.

TABLE 15

COMMISSIONS AND DISCOUNTS TO INVESTMENT BANKERS

Year Ended June 30	Bonds
1940	1.9
1941	1.8
1942	1.5
1943	1.7
1944	1.5
1945	1.3
1946	.9
1947	.9
1948	.6
1949	.8

Thus underwriting spreads have declined considerably in the last ten years, and in the case of the large issues of utility bonds such spreads frequently dip below 0.50 per cent. This has been an important tendency as far as direct placement is concerned, for it has reduced the flotation cost advantage of direct placements. Where in many issues this flotation cost saving amounts today to only 0.03 per cent when expressed in terms of interest cost, in the thirties, this saving would have been approximately 0.10 per cent, over three times as great.

Thus, the flotation savings effected by direct placement today are considerably less than they were fifteen years ago.

Conclusion as to Relative Interest Costs of Direct versus Public Issues

On the basis of the available evidence, which admittedly is not all that one would wish, the following conclusions seem justified:

1. In large issues the saving in flotation costs translated into terms of interest cost amounts to between 0.03 per cent and 0.06 per cent. Thus, on a 3 per cent issue these savings would reduce the interest cost say from 3.00 per cent to 2.94–2.97 per cent. These savings are materially less than they were in the thirties, largely as a result of the decrease in the costs of competitive bidding.

2. This would mean an extremely narrow range for bargaining in direct placement; there would be very little tolerance for imperfect market conditions. It would be logical to assume that only in the case of a fully informed perfectly competitive market could the bargaining be kept within such a range. For example, if the knowledge of what the issue would bring in the public market were only slightly in error, it might nevertheless completely nullify the flotation cost savings.

3. Evidence is available that bargaining is not as a matter of fact confined within the area of savings in flotation costs. It may not even usually be so confined.

4. In the case of utility issues, the evidence available indicates that in the case of large issues competitive bidding usually results in a lower interest cost to the borrower than does direct placement. This is probably one principal reason why in 1949 77 per cent of the dollar volume of issues $10,000,000 and over were placed by competitive bidding.

5. In the case of industrial issues, there is less available evidence, but the burden of proof would appear to be on the shoulders of those who contend that direct placement results in a lower net interest cost to the borrower where the issue is of definite investment quality and has no unusual features.

6. If all bidding for all types of debt securities—public utility, railroad, industrial—were competitive bidding, a much more convincing argument could be made that the savings realizable in this case would be partially or fully passed on to the borrower.

Why, in the face of a lack of advantage in interest cost and a possible definite disadvantage, does the bulk of large industrial and miscellaneous issues go directly. One answer is that considerations other than interest rate cost may be more important, and another is that corporate managements may have been under a misconception as to the relative economy of direct placements and have been stressing flotation cost

savings without giving sufficient weight to net interest cost. Probably both these conditions are present.

At this point, it should be noted that in the majority of large direct placements an investment banking firm represents the borrower and recommends the direct placement method. Thus, the investment banking fraternity bears some, and perhaps considerable, responsibility for the trend toward direct placements. This may seem strange in view of public pronouncements against direct placements by the underwriting industry. It really is not strange, however, when viewed from the standpoint of the individual underwriter handling the direct placement rather than from the standpoint of the underwriting field as a whole. In the case of an investment banking firm which places an issue directly it will receive a commission on the entire offering whereas in the case of an underwritten issue, the firm will receive the underwriting commission only on the portion of the issue which it underwrites and this portion is usually small. If, for example, in a public utility direct placement of $8,000,000, the investment banker receives a fee of ¼ of 1 per cent, he will receive $20,000, and his expenses in connection with the deal usually will be quite small, and there is no risk involved. On the other hand, if this issue were to be underwritten by a syndicate and offered publicly, this same investment banking firm might underwrite say $2,000,000 and receive a commission of say 0.40 per cent or $8,000, against which it will have substantial expenses and the underwriting risk. This is a theoretical example only; it would appear that often a particular underwriting firm will have more to gain from a direct placement which it controls than from a public offering of the same issue which it underwrites in part.

Direct Placement and the Lending Institutions

In my opinion, direct placements are attractive investments for insurance companies for the following four reasons, not all of which may be present in each instance. In the first place, the yield on direct placements is somewhat higher than on comparable public offerings. Secondly, the lender has a direct part in the negotiation of indenture terms, and in the usual case a better or more protective indenture from the lender's viewpoint is obtained. Thirdly, it affords a better opportunity to the lender to make a closer analysis of the investment, particularly as to management. Further, it affords the lender the opportunity to put out large amounts of money at one time in a single issue; this is an advantage which is particularly important in the case of the large companies.

The Large Insurance Company versus the Small Insurance Company

One problem of direct placements which is frequently discussed, particularly within the life industry, and by legislative bodies, is the problem of the small insurance company. It has been felt that the small insurance company does not have access to the direct placement market, and, consequently, it is deprived of an opportunity to invest its funds profitably and in a diversified manner. What are the facts of the case? The only information on the subject that I know of has been compiled by the Investment Research Staff of the Life Insurance Association of America. The Association selected twenty-eight United States life insurance companies; it was originally decided to include the eighteen

TABLE 16

1949 and 1948 Portfolios—Direct Placements as Percentage of Corporate Bond Portfolio and of Total Assets, 28 United States Life Insurance Companies, Grouped by Size

Rank by Asset Size	Percentage Corporate Bond Portfolio 1949	1948	Percentage Admitted Assets 1949
1– 4 (largest)	65.9	64.2	26.0
5– 8	53.2	50.8	22.4
9–13	40.2	38.3	18.3
14–17	25.7	23.6	9.2
18–24	24.5	20.0	5.8
25–28 (smallest)	32.7	30.8	7.4
Total 28 companies	55.8	53.5	

largest United States companies and ten others especially selected as being active in the direct placement field. This selection actually resulted in the inclusion of the twenty-two largest companies plus six others.

These companies were then distributed by size groups and information tabulated as to holdings and acquisitions of direct placements. Tables 16 and 17 give certain of this information.

It can be seen from these tables that the larger companies have a much higher percentage of their assets and security portfolios in direct placements than the smaller companies, and that the acquisitions of direct placements in 1948 and 1949 by the large companies comprised a substantially larger percentage of total acquisitions than in the case of the small companies. It is probable, furthermore, that these tables understate the difference, for all of the small companies were selected as being active in the direct placement field, and presumably therefore

had a higher percentage of direct placements in their portfolios than other companies in their size groups.

Thus, the facts indicate that the small companies have much fewer direct placement investments relatively than the large companies. This could be due to several factors. It could mean that such companies were cut off from certain fields of investment opportunities by virtue of the direct placements going to the large companies, or it could mean that small companies as a matter of policy do not choose to enter the field either because they feel unequipped to do so or find other outlets more attractive. Probably both of these are true to a certain extent. In this connection, however, I believe that it is very important to make a

TABLE 17

1949 AND 1948 ACQUISITIONS OF CORPORATE SECURITIES AND DIRECT PLACEMENTS, 28 UNITED STATES LIFE INSURANCE COMPANIES GROUPED BY SIZE

Rank by Asset Size	Per Cent 1949	Per Cent 1948
1– 4	79.2	80.4
5– 8	69.6	52.6
9–13	59.8	57.6
14–17	55.0	51.0
18–24	49.4	33.7
25–28	50.6	46.2
Total 28 companies	72.2	68.5

SOURCE: Statistics prepared by the Investment Research Staff of the Life Insurance Association of America.

sharp distinction in size category as to just what constitutes a small company. For example, in the foregoing listing of companies by size, the smallest has assets somewhat less than $200,000,000. This in reality could be termed a medium-sized company, and companies with assets of say $75,000,000 or less could be termed a small company, relatively.

Let us first take the case of the medium-sized company with assets of $200,000,000–$350,000,000, such as would be characterized a small company in the foregoing tables. Such a company, depending upon company policy and the quality of the issue, might be willing to put anywhere from $500,000 to a maximum of, say, $2,500,000 in one issue. Consequently, a broad field of industrial direct placements would be available to it. In the case of the smaller issues, it might be able to take the whole issue, and in the case of a medium-sized issue, it might take part of it along with one or more other companies. On the other hand, if a large life insurance company in a very sizable loan wanted to include

smaller companies, a participation of $500,000 to $2,500,000 would represent sufficient size to make it feasible. A number of large issues have included participations for smaller companies in amounts of $500,000 or even less in some instances.

On the other hand, the medium-sized company is at a distinct disadvantage if the distribution of a large issue is restricted to only a few companies, for its buying power would be insufficient to make it a participant. Likewise, a large loan will in all probability only in rare instances be brought first to a small company so that its participation in such loan will rest upon the policy of the borrower, the intermediary, if any, and the large insurance company to whom the loan is brought initially.

These conclusions are supported by the data gathered by the Investment Research Staff of the Life Insurance Association. Reference to Tables 16 and 17 will show that whereas in 1949 the four largest companies held approximately 66 per cent of their total corporate bond portfolio in direct placements and the two smallest size groupings held only 24.5 per cent and 32.7 per cent in direct placements, the discrepancy between these groups becomes much less when viewed as to 1949 acquisitions—79.2 per cent for the four largest as against approximately 50 per cent for the two smallest groups. Thus, the discrepancy in holdings is tending to narrow somewhat. Furthermore, there is substantial difference among the companies within the various groupings, presumably reflecting managerial policy toward direct placements. Thus, with respect to 1949 acquisitions, a number of companies in the smaller size categories acquired almost as large a percentage through direct placement as the largest companies. In the smallest size group, one company has the highest percentage of direct placement acquisitions of any of the twenty-eight companies, and, likewise, has the highest percentage of its corporate bond holdings in direct placements.

Summarizing, in my opinion, the medium-sized company, while it would generally welcome any opportunity to participate more in the large direct placements, is not faced with a very serious problem in this regard. As a matter of fact, to some companies participations in certain of the large direct placements would be unattractive because of the belief of the company that it can invest its funds at a higher net interest yield elsewhere. It has available to it a fairly wide field for direct placements if it chooses to seek such issues. The investment problem of this size company is less pressing than that of the largest companies, and the company has greater flexibility in dealing with its investment problems.

As far as the small company is concerned, the company with assets

of say $75,000,000 or less, the problem is more serious. Unfortunately, no data have been compiled concerning these companies, and there are hundreds of them. The buying power of such companies for a single issue is relatively small and consequently it is not very practical for them to share much in large direct placements; to distribute a large issue among such companies, aside from practicality, would involve questions of legality, i.e., whether the issue would involve too many purchasers to qualify for exemption from registration as a direct placement. Consequently, investment in large direct placements is not available to them, and thus one avenue of investments is practically closed to them; this is particularly true in the case of industrial issues, the bulk of which go direct. In the utility issues, the bulk of the large issues go competitively and thus the small company has ample opportunity to purchase such issues. This virtual exclusion from large direct industrial issues does not mean that such companies do not engage in direct placement. A good example of this fact is one relatively small insurance company with total admitted assets of approximately $60,000,000 which made nineteen industrial direct placements in 1949 totaling approximately $5,000,000. The smallest of the direct placements was $60,000, the largest was over $1,000,000, and the average loan $200,000–$300,000.

Participation in direct placements involves a number of problems for such companies. It is relatively much more expensive for the small company to enter the direct placement field than the larger-sized company. Two principal factors account for this. In the first place, the increased investment staff which is indispensable for the proper initial investigation and follow-up of industrial direct placements, when related to the investment portfolio, is a higher percentage for the smaller company than the larger company. A small company will have to diversify its investment holdings as much as a large company. Thus, although its portfolio may be $20,000,000 as against $500,000,000 or more, it will still have to make almost as many individual investments as the large company. Secondly, the relatively small buying power of the small company usually confines its industrial direct placements to the smaller lesser known industrial companies. Analysis of these companies presents more difficulties and consumes more time than analysis of large well-known companies where financial records are publicly available. Many small companies feel that they cannot afford the requisite investment staff and hence do not enter the direct placement field.

A second problem arises in that the confining of industrial direct placements to the smaller industrial companies means greater risk because investment experience tells us that the smaller industrial

companies are exposed to more economic risk. Whether or not the increased interest rates obtainable compensate for the higher risk is a question which will probably not be answered until we again pass through a period of industrial depression.

Lastly, the problem is raised that in general in order to obtain sufficient buying power to be able to enter the direct placement field, even in the smaller industrial companies, the small insurance company usually has to lend in a single issue a higher percentage of its assets than in the case of the medium and larger-sized companies. Thus, in the case of a $300,000,000 company, an investment of $750,000, which is an adequate size to participate in direct placement, would represent only 0.25 per cent of assets. In the case of a $25,000,000 company, 0.25 per cent would amount to $62,500 which would in most cases be too small an amount to enable it to participate in the direct placement field. If it chooses to do so it may have to lend 0.50 per cent or 1.00 per cent of its assets in one issue. While these are not dangerous percentages by any means, and are at times exceeded by medium- and relatively large-sized companies, nevertheless, it does mean a greater concentration of risk for the smaller company.

The direct placement question then does raise serious problems for the small insurance company. Once again, however, the question should not be distorted out of its true perspective. The profitable investment of its assets has certainly not been any more of a problem to the smaller company than to the larger company. Probably the reverse is nearer the case. I have yet to hear an investment official of a small company complain that he cannot keep his funds profitably invested. Therefore, while it is true that participation in direct placements involving the larger well-established industrial concerns is largely denied the small company, the investment problems raised thereby do not appear to present any real threat to the ability of the small company to invest its assets safely and profitably.

Relationship between Borrower and Lender

The direct and close relationship between the borrower and the lender has caused concern lest the large insurance companies exercise a controlling influence over the borrower. This concern was voiced both in the Celler Committee hearings and in the New York State Legislative Committee hearings. The question is touched upon only briefly in this paper. Certain salient points, however, can be brought out.

It is important to note that this is really not a problem peculiar to direct placement. There is no way to distinguish a direct placement in

form from a public issue; two utility bond issues, for example, would look almost exactly alike whether they had been placed publicly or privately. Moreover, the fact that the large insurance companies hold very large amounts of a borrower's debt issue would be true regardless of whether such debt had been underwritten or whether it had been placed directly with the insurance companies. The fact is that the demand for investment grade corporate bonds is largely an institutional demand, and such issues will find their way regardless of the method of distribution into institutional portfolios, and the largest institutions will hold the largest amounts.

A second general point to note is that if corporations feared any such control as a result of direct placement of their securities they would not sell their bonds in this manner. There is no compulsion whatsoever for them to place their securities directly; it is completely a matter of their own choice.

In addition, it must be realized that the relationship between the two parties is strictly a debtor-creditor relationship, and is closely defined by the terms of the indenture covering the bond issue. Thus, the lender can exercise no control over the management whatsoever as long as the latter is meeting all the terms of the indenture. In this respect there is one possibility that since indentures in direct placements are usually more tight than in the case of public offerings, there will arise more cases of default; this is probably true.

Once a default arises it is true that the insurance company is in a position to exercise some control; that is the very purpose of drawing an indenture with default provisions, and it is necessary for the adequate protection of the investment. In the event of a minor default, it is probable that with proper assurance as to the safety of its investment, the default can be cured by appropriate action on the part of the borrower, or by a change in the indenture agreed upon by the lender. In the case of a major default resulting in bankruptcy, the relationship between the borrower and the lender becomes subject to bankruptcy law.

It is important to realize that the insurance company investor is not in the slightest degree interested in securing control of the borrower for its own advantage and profit; nothing could be further from the truth. The ideal investment as far as the insurance company is concerned is one in which there never is any question of default. Moreover, once a security goes into default, the primary aim of the insurance company is to see the company in a better position so that it can cure the default and pay its obligations. Thus, in almost all instances the best interests of the business will coincide with the best interest of the insurance company, so long as the latter adopts a long-term point of view. The in-

surance company is in a much better position to adopt a long-term view of the situation than other investors, such as commercial banks, for example, where liquidity needs may force a hasty liquidation. Consequently, from the standpoint of the borrower, it would seem to me that the insurance company would represent the ideal long-term creditor.

Lastly, an examination of the record of the insurance companies in the case of the wholesale bankruptcies that arose during the 1930's reveals no grounds for concern as to any domination or control that insurance companies may exercise in the case of direct placements. There should be little difference in the future experience with direct placements.

In this connection, it should be noted that the permissible equity investment of life insurance companies is very limited at the present time; therefore, any equity securities that they receive in receivership in exchange for debt obligations must be disposed of within a relatively short period.

Thus, in my opinion, there is little foundation for fear that large-scale institutional investment in corporate debt will result in any widespread control over corporate borrowers.

Regulation of Direct Placements

Lastly, let us take a brief look at the regulation to which direct placements are subject.

An effective system has been set up by state regulatory authorities to supervise direct placements. This regulatory system was set up largely as a result of two factors, both of which have to do with the problem of valuation of direct placements. The valuation of securities held by life insurance companies for their annual statements is under the jurisdiction of the Committee on Valuation of Securities of the National Association of Insurance Commissioners. This committee has published annually, for the last forty-three years, a volume which lists every security held by domestic insurance companies and a valuation as at the close of the calendar year for each security listed. Valuations established by the Committee are used by state insurance departments in the examination of insurance company reports. They are also used by the insurance companies in the preparation of their annual statements.

If a corporate bond is not in default, and is rated in one of the first four grades, i.e., not lower than Baa, by two recognized rating agencies, or if the yield to maturity, based on December 31, 1949 and December 31, 1950 Association values, does not exceed 1.70 per cent and 1.50 per cent respectively plus the yield for comparable maturities of fully taxable unrestricted United States Governments at the respective dates,

the bond can be carried at its amortized value; if the bond is in default, or rated Ba or lower, then it must be carried at market value. However, in the case of direct placements, neither of these yardsticks is available; the rating agencies do not rate direct placements, and there is no market quotation for them. In addition, the close relationship between the borrower and the lender in a direct placement has caused concern in some quarters that an insurance company when faced with a default in a direct placement would cure this default merely by rewriting the indenture, and be able to thereby escape reporting the security as in default and thus not eligible for amortization.

These problems, and others, led the National Association of Insurance Commissioners to considerably augment the staff of its Committee on Valuation of Securities. In this connection every life insurance company is now required to file with the Committee the following information concerning its direct placements:

1. Statement describing history and operations of issuer of securities.
2. Balance sheet, income and surplus statements for the three calendar or fiscal years next preceding the date of acquisition.
3. Interim financial statements and future annual audits.
4. Changes in indenture terms.
5. Any other information which might be helpful to the Committee.

This constant flow of information to the Committee provides a method by which continuous supervision can be exercised by the Committee over direct placements. By virtue of its analysis of these data, the Committee determines whether or not a given direct placement qualifies for amortization; if it so qualifies, then it may be carried by the insurance company at its amortized value. If in the opinion of the Committee, after careful examination of the data, the loan is one in which the speculative qualities are predominant, the holder of the security is not entitled to carry it at amortized value, but must carry it at a value fixed by the Committee. The record of direct placements has been excellent to date; however, in a few instances, writedowns have been required.

In my opinion, the regulatory valuation process should be primarily concerned with the basic question of whether or not a direct placement qualifies for amortization and should not attempt to determine theoretical market value for those issues which qualify for amortization. Such a task could not only be a prodigious one, even if possible of achievement; it would also raise serious problems of a fundamental nature without accomplishing any really conclusive benefits. As already pointed out, this is the line along which regulatory valuation has proceeded and it is to be commended for it.

Conclusion

Direct placements have assumed a position of great significance in corporate bond financing. They have not yet met the acid test of time especially under adverse general economic developments but there is no present reason to assume that they will not meet such a test successfully. They are not a temporary phenomenon but appear to be here to stay. Their greatest contribution in my opinion has been in opening a new and, in many cases, the only avenue of long-term financing to the small but well-established business. As to future growth, it would appear that direct placements have approached their peak relative to total corporate bond financing. It would be surprising to see the percentage of direct placements to total bond financing rise much beyond the 50 per cent level reached in 1948 and 1949; certainly a figure of 60 per cent would be a top figure assuming a more or less normal distribution of offerings among industries.

DIRECT PLACEMENTS
(Discussion)

MARSHALL D. KETCHUM
The University of Chicago

MR. CONKLIN'S PAPER builds upon and extends the analyses of direct placement made in the other three leading studies of recent years which are referred to by him: the article by Harold Fraine of the University of Wisconsin, published in the *Journal of the American Association of University Teachers of Insurance* in March, 1949; the paper by Frazer Wilde of the Connecticut General Life Insurance Company, which appears in the 1950 Proceedings of the American Life Convention; and the article by Raymond Corey of Harvard University in the November, 1950, issue of the *Harvard Business Review*. I shall comment briefly on only a few of the points dealt with in one or more of these four papers.

All four writers agree that the costs of flotation are less in direct placement than in a public offering. Mr. Conklin has gone farther than the others in attempting to quantify the savings in direct placement and the possible allocation of these savings. On the basis of limited data, he concludes that the reduction in flotation costs can be expressed as a saving in effective interest cost of from three to six yield basis points, with the probable average closer to three than six, especially in the case of large public utility issues. Thus, if a borrower could sell publicly a bond issue at a price that would give it a cost of 3.00 per cent after payment of flotation costs, it could reduce its cost to 2.97 per cent by a direct placement, *if* it could be sure of obtaining as high a price in a direct placement as in a public sale. There are two elements in this contingency. In the first place, to what extent are the lender's costs greater in a direct placement than in the purchase of an issue from an underwriter and how far, therefore, must the lender lower its bid price to cover these additional costs? Secondly, to what extent will bargaining and alternative sources of funds affect the distribution of the savings of direct placement between borrower and lender? Mr. Conklin has considered the latter of these questions in some detail; the former he has touched upon only lightly.

With respect to the first of these questions, an insurance company might find that it cost enough more to make a direct loan so that it would be required, if it insisted on recovery of its costs, to lower its

bid price to a figure which would mean a cost to the borrower of 2.98 per cent or 2.99 per cent, as compared with a cost of 2.97 per cent to the borrower if it obtained the benefit of all of its reduction in flotation costs and compared with 3.00 per cent for money obtained through a public sale. Put in another way, the saving of three yield basis points to the borrower is not the total saving of borrower and lender combined. What the borrower saves is partially offset by the increased costs of the lender. The trouble comes from thinking of the underwriting fee in a public issue as completely saved to both borrower and lender in a direct placement. The borrower does not have to pay such a fee directly in a private placement, but he may have to pay part of it in the form of a lower bid price if the lender has costs which are increased because there has been no underwriter.

TABLE 1

POSSIBLE ALLOCATIONS OF SAVINGS OF DIRECT PLACEMENT BETWEEN BORROWER AND LENDER

2.97% BOND

	Borrower		Lender	
	Price (Per Cent)	Cost (Per Cent)	Price (Per Cent)	Yield (Per Cent)
Public Flotation	Par–.03	3.00	Par	2.97
Direct placement				
A. Savings + .01% to borrower	Par	2.97	Par	2.96*
B. All savings to borrower	Par–.01	2.98	Par–.01	2.97*
C. Savings divided	Par–.02	2.99	Par–.02	2.98*
D. All savings to lender	Par–.03	3.00	Par–.03	2.99*
E. Savings + .01% to lender	Par–.04	3.01	Par–.04	3.00*

* After adjustment for .01% assumed additional costs of lender. These additional costs are probably considerably less than 1 yield basis point.

I do not know of any studies which indicate the magnitude of these increased costs. Some financial vice-presidents of insurance companies think that they are considerable; others believe them to be negligible. It appears, however, that although investment departments of insurance companies do not accept uncritically the reports of investment bankers, they believe that their study of a deal does not need to be so intensive when a banker in whose judgment they have confidence has already made a thorough investigation. In a direct placement the borrower generally pays the costs of engineers' and appraisers' reports, but the evaluation of these reports by the insurance company is a cost of making the loan that should be reflected in the form of a lower bid for the issue.

The second question raised above is that of the allocation of the savings of direct placement between the borrower and lender and the actual costs of funds in direct placement as compared with other means of obtaining funds. Table 1 indicates the allocation of the *net*

savings of direct placement between the borrower and the lender under several sets of conditions, assuming a bond with a coupon rate of 2.97 per cent. "Cost" to the borrower in the table does not include the expenses incurred by it in a direct placement. The table assumes that the lender will experience increased costs in direct placement as compared with purchase from an underwriter to the extent of one basis point and that the net saving in direct placement will therefore be two basis points.

In the direct placement section of the table, Rows B, C, and D indicate the results when the lender obtains none, one-half, and all, respectively, of the savings of direct placement. Row A indicates a situation in which the borrower, by direct placement, is able to obtain more than the net savings in flotation costs. In Row E, the lender is able to get the savings of direct placement and more. One might place under direct placement, of course, any number of rows above A, representing successively greater advantages to the borrower, and any number of rows below E, representing greater advantages to the lender. Case A might develop out of a large supply of funds and a limited supply of public offerings at a 2.97 per cent yield, or out of certain other competitive imperfections, such as ignorance on the part of the lender. Case E would be indicative of ignorance on the part of the borrower of his ability to float a public issue at a cost of 3.00 per cent.

Mr. Conklin believes that in private placement the bargaining advantages probably lie with the lender, especially in those cases where the borrower does not make use of an intermediary with a broad knowledge of the capital markets. This is supported by his finding that in the case of nine public utility issues publicly offered under competitive bidding, the basic competitive bid was considerably higher than the bid which would have been received in a private deal. The competitive bid was on the average sufficiently higher to enable the borrowers to pay the costs of public flotation and still leave them with a true interest cost of 3.072 per cent in a public offering versus 3.22 per cent in a direct placement. While the sample is inadequate, it would appear that public sale may be superior to private placement for large, well-established companies which definitely have the alternative of selling issues publicly with low flotation costs.

The table assumes that we are talking about only one company, a company that can obtain funds at a cost of 3.00 per cent through a public offering. However, if we think of the table as representing different companies for the different columns, it is probable that the farther we move downward, the more likely it is that we would be representing the situation of small borrowers, companies which actu-

ally cannot float a public issue, or can do so only with a cost higher than 3.00 per cent. The demand of the insurance companies for the high-grade bonds of the large corporations perhaps creates competitive advantages for these borrowers; the smaller borrowers, suffering from lower market credit ratings and finding themselves less able to sell issues publicly, probably have competitive disadvantages with respect to the lenders. However, since the total savings in direct placement as compared with public issues are considerably in excess of three basis points for small companies, these borrowers may still fare well in a direct loan because of the large total savings to be divided.

Mr. Conklin quite properly points out that a borrower would be ill advised to concentrate his attention solely on savings in flotation costs in deciding how to obtain funds. If, as in the case of the nine utility issues which he cites, a company can obtain a competitive bid sufficiently high to enable it to bear the flotation costs of a public sale and still achieve a lower cost of funds, then competitive bidding should be used. Note, however, that this assumes that the total cost of funds is a result only of what takes place at the time the funds are obained. A number of writers have pointed to the possible saving to a corporation in being able to buy back its bonds on the open market at prices under par. The company sacrifices this possibility when it places an issue directly. Professor Corey mentions the possible saving, but indicates that "several authorities have questioned its relative importance in the total cost picture." Nevertheless until the experience of corporations with issues in the hands of the public has been more completely assembled for analysis, we would be unjustified in neglecting this factor. It is obvious that an average purchase price of slightly below par on bonds bought for the sinking fund or for retirement would quickly wipe out the relatively small savings in flotation costs in a direct placement.

It is probable that the trend toward direct placement has been strengthened by the realization on the part of corporate financial officers that we have been in a period of declining interest rates and the belief on their part that interest rates are likely to remain low. Corporate managements might well ponder whether rates will continue low. The problem is largely one of governmental policy. In the future the government may or may not be successful in stabilizing income and employment at high levels. If it is not successful and the cycle continues to plague us, there will be periods when weakening credit will enable corporations to buy in their bonds at figures under par. If the government is able to stabilize business activity, this stabilization will be accompanied (*a*) by continuously low interest rates,

with at least mild inflation in some periods, or (*b*) by efforts to stabilize prices by permitting interest rates to fluctuate. If interest rates are in some periods allowed to rise, this will give corporations an opportunity to repurchase their bonds in the open market at lower than issued prices. Of the three possibilities mentioned, it is only if interest rates are kept continuously at the historically low levels now prevailing that corporations will be denied this possible saving.

We have seen that flotation cost is only one factor determining total cost of funds as established at time of security issuance, and in turn we have seen that other factors, particularly the price at which bonds are retired, may change the cost of funds over the life of the bonds. Having determined the probable cost of funds, the borrower will, of course, recognize that still other factors enter into the decision as to how to finance. The most important of these have been brought out in the articles under survey.

Mr. Conklin refers to data prepared by the Life Insurance Association of America which show that borrowers with assets of from $500,000 to $5,000,000 have been able to obtain funds through direct placements but have not been able to float public issues. The implications of these data for the problem of small and medium-sized business need to be stressed. Direct placement seems to offer increased possibility of providing smaller businesses with capital funds in larger amounts and on more favorable terms.

A related problem is that of the small insurance company in relation to direct placement. I recognize that it is easy to say glibly that the small insurance company can find outlets for funds by being more aggressive in its attempts to discover smaller borrowers in need of funds. I nevertheless believe that in a period of increasing demand for funds such as is probably ahead of us, small lenders are likely to be able to find small corporations which need funds and which, in the absence of interest on the part of investment bankers in their issues, are willing to pay rates for funds which compensate insurance companies for their costs in making the loans.

THE VALUATION OF SECURITY HOLDINGS OF LIFE INSURANCE COMPANIES

H. G. FRAINE
The University of Wisconsin

THE SYSTEM AT PRESENT used by the life insurance commissioners for valuing the assets of life insurance companies requires considerable change in order to be appropriate for the needs of the companies, the policyholders, and the rest of the economy.

Unless changed, the requirements imposed by the commissioners are likely to discourage investment policies needed for long-term protection of the policy reserves and for the healthy and balanced financing of production and trade. Unless changed, they are likely to encourage investment policies that result in unsettlement of the capital market and to discourage policies which would otherwise be followed and which would contribute to stability of that market. Unless changed, the requirements will encourage the disbursement as dividends of funds which should be retained for replacement of depreciated assets. They will result in overvaluation of the assets in times of prosperity and undervaluation in times of depression. They will tend to promote inequities between withdrawing and continuing policyholders and make more difficult the maintenance of solvency in times of business depression instead of cushioning the losses likely to occur in such times.

Before considering a possible remedy, let us get a picture of the principal aspects of the present system and then note more specifically how the continuance of the system is likely to contribute to the unfortunate effects already mentioned.

BRIEF DESCRIPTION OF PRESENT SYSTEM

Within four days from now the year of 1950 will come to an end. With the end of the year, the life insurance companies will begin the work of preparing annual reports of condition for submission to the state insurance commissioners. These statements will contain totals and details of assets, liabilities, income, and expenses. The liabilities will consist mainly of a measure of the policyholders' interest in the assets. This interest will not be the aggregate amount to be paid the beneficiaries upon death. Most of the people insured are not likely to die until far in the future. In the meantime the assets will be expected

to earn a certain minimum rate of income. Reinvestment of at least that minimum of income at that certain rate should produce growth in the assets sufficient to pay off the face of the policies at the probable time of death. The interest of the policyholder is reflected in the policy reserves, on the liability side of the balance sheet, and these are accumulated at the rate of asset accumulation assumed by the actuary in setting the premium.

Does the statement of condition correctly reflect the amount of assets available for the liabilities? This, of course, depends on how the assets are valued. Considering that a company may have to report its condition to the commissioner of each state in which it does business and considering that each state could differ from the others in valuation requirements, it might seem a hopeless task to try to summarize such requirements. Fortunately the commissioners have banded together into a National Association of Insurance Commissioner (hereinafter referred to as the "NAIC"). It has been the custom of this association in annual meeting to adopt resolutions defining the valuation requirements for the next annual report and to delegate the administration of these requirements to its Committee on Valuation of Securities (hereinafter referred to as "the Committee"). Our consideration can, therefore, be confined to the system involved in these resolutions.

The underlying concept of the system comprised by these resolutions is simple. The fundamental basis for practically all corporate securities is stated to be market value. This concept is laid down in the opening sentence of the first of the resolutions released by the Committee on June 30, 1950, with regard to valuations for the 1950 statements. That sentence reads as follows:

> RESOLVED, that the inventory of stocks, other than of insurance companies and subsidiaries, and bonds in the annual statements of insurance companies, societies and associations as of December 30, 1950, the following basis is recommended as fair market value:
>
> 1. That all stocks, other than of insurance companies and subsidiaries, and bonds shall be valued at the market quotations as of December 30, 1950, excepting bonds secured by the full faith, credit and taxing power of political subdivisions of the United States of America and political subdivisions of the Dominion of Canada which are not in default as to principal or interest on December 31, 1950.

Although the concept is simple, the complete statement of valuation requirements is lengthy, running to six and a half pages of fine print, and quite complex. To appreciate the complexity it may be sufficient to note the following facts: The system of valuation is different depending upon whether the investment is or is not what is commonly called a security. If the investment is in a mortgage, it can

be valued at face; if in a housing project, it can be valued at depreciated cost. If the investment is a security, we must first observe whether it is a bond or a stock. If a bond, the basis of valuation depends upon whether it is rated high or low by the investment services. The basis of valuation may also depend upon the spread of its market yield from the market yield of a government bond of corresponding term to maturity. (The government bond must be one of those open to purchase by national banks.) Among the general class of fixed income securities, the basis of valuation of preferred stocks is different than for bonds. And for some of the preferred stocks the basis is different than for common stocks. Preferred stocks that have active market quotations are valued differently from unquoted preferreds.

The complexity and length of the requirements are chiefly due to two causes. One is that most of the corporate securities held by the life insurance business are not quoted in the market; but the system attempts to assign to them an appropriate market value. The other is that an exception to market value is made for securities with certain characteristics. These securities may be valued on what is referred to as an "amortized" basis; that is, cost adjusted annually for the gradual amortization of any difference between cost and maturity value. This relief from a market basis is available for bonds with maturity dates which on June 1, 1950, were rated among the top four ratings by two of the recognized rating services or bonds which on the basis of alternative tests can be regarded as of equivalent grade.

To summarize, the valuation of securities is treated independently on the valuation of other earning assets, such as housing projects and real estate mortgages. Of the types of United States and Canadian securities entering importantly into the life insurance investment picture, we find that most government, state, municipal, and corporate bonds of high or medium grade at the time would be reported on an amortized cost valuation. Other securities, including bonds regarded at the time as below the quality indicated by the Baa rating, all preferred and common stocks, and defaulted bonds, would be reported at the year-end market valuation or the Committee's estimate of an equivalent market value.

Weaknesses of the Present System

Overvaluation in prosperity periods.—The system tends to overstate values in a time of prosperity. This is likely to be true whether the assets are required to be reported on an amortized basis or on a market basis. Let us first consider the amortized basis. The purpose of amortization of premium and accumulation of discount is to move

the valuation systematically and gradually closer and closer to face or maturity value. Such a value must be regarded as a maximum value. The yield to maturity value on a fixed income investment is as much as the average life insurance company can expect to get. The higher increment of yield that is received when a bond is called at a premium does not usually represent a gain, but in effect is rather merely a partial offset to the reduction in income that is almost certain to be suffered upon reinvestment of the proceeds in securities of the same degree of risk. Similarly, appreciation of the market price above maturity value cannot be realized upon to advantage. Because of the compulsion to keep funds invested, rises in market quotations above cost are rarely realizable to an insurance company, for reinvestment would usually have to be made in other securities equally high priced with relation to risk.

Although more than face value is unlikely to be gained, it is almost certain that there will be some ultimate depreciation below this maximum. An investment officer would not invest his company's funds in any particular corporate bond if he expected it to default. But such an officer would not be guilty of such optimism as to think that he will have no more defaults among his corporates than among his United States government bonds of corresponding term. He requires a higher yield to take the added default risk involved in corporates. Defaults have occurred in the highest of the rating grades, Aaa,[1] and yet corporate bonds rated as low as Baa are required to be valued at their maximum values without allowance for any future impairment of that value through future defaults.

Market values also, as required for other securities, tend toward overvaluation when applied in periods of prosperity. This is surely true for the fixed income securities and likely to be true also for the common stocks. The dividends and interest on preferred stocks and bonds in such a period appear more amply covered by earnings than in a business depression. The prosperity values are maximum in the sense that with increased prosperity such securities can yield no higher income payments. Yet with a change from prosperity to depression there is even more likelihood of suspension of dividend and interest payments among their number than in the case of the bonds of the four highest ratings. To value these lower-rated bonds and preferred stocks at prosperity prices without allowance for some defaults, with more or less permanent impairment of value, is to give them higher than reasonable values.

1. From data furnished by the Corporate Bond Research Project of the National Bureau of Economic Research, under the direction of Dr. W. B. Hickman.

In the case of common stocks it is not so clear that prosperity values are maximum values. Unlike the fixed income securities, an increase in earnings accrues to the common stockholder either in the form of an immediate increase in dividend income or in the form of an increase in his investment in the business, which in turn increases the base for future common dividends. Thus we find that for many decades the long-run trend in common stock market values has been upward to the extent of a few per cent per year. And if we can ignore the quite unusual extent of the 1929 peak and the 1932 trough, we find that the prosperity values in each cycle have been validated, not merely by the values attained in the prosperity phases of later cycles, but also by the increase in dividend income and in many cases by the height of even the depression quotations in later cycles. Historically, the risk in common stocks as a class has been a short-time rather than a long-time risk, a risk of cyclical rather than secular depreciation.

Thus we would not be on firm ground in questioning the use of market quotations as standards of common stock values in times of prosperity were it not for another fact. That fact is that the same system which requires market values in prosperity also requires the use of market quotations in time of depression. While it might be difficult to say that one or the other of these values is wrong, it is certainly clear that they both cannot be right. It is not uncommon for a common stock to sell for two or three times as much in prosperity as in depression. To require that a common stock be written up to market value in a time of prosperity is to impose the likelihood of a greater write-down in the next depression. Such a valuation system manufactures and magnifies capital losses. It is hard to escape the view that the use of market value in time of prosperity without allowance for the write-downs required upon a cyclical downturn amounts to substantial overvaluation.

Undervaluation in times of depression.—The present valuation system tends to undervalue common stocks and fixed income securities in a depression. In the case of common stocks, the historical evidence is so obvious and conclusive that we may without pause turn our attention to fixed income securities.

Fixed income securities that have defaulted are required to be reported at market value. Such a basis is not inappropriate. There is some evidence of a tendency for the market quotations to undervalue securities at the time of their default.[2] For example, out of almost $25,000,000,000 of corporate bonds outstanding in the hands of all

2. The statistics in this and the following two paragraphs are from the following sources: On all corporate bonds—the Corporate Bond Research Project (see note 1). On holdings of life insurance companies—the Life Insurance Association of America.

investors on January 1, 1928, about $3,525,000,000 had defaulted by 1940. The market value of these on that date aggregated only $674,000,000 which was $2,851,000,000 less than face. Within four years the aggregate recovery on these bonds had reduced the deficiency from face to $1,782,000,000. This was a substantial recovery from the lower values, but there was still substantial deficiency from face value. Because of the likelihood of a substantial permanent impairment of value, the use of market value in depression for defaulted securities is probably better than its use for any other class.

However, the use of market value for fixed income securities not in default tends toward substantial understatement of their value to the companies as long-run investments. As business earnings decline in depression, the investment ratings on many bonds are reduced. This means that many bonds formerly classed as amortizable, because they were rated among the top four rating grades, must now be reported on a market basis, because their ratings have dropped below the limit of admittance to the amortizable classification. Had such a system been applied to all of the corporate bonds outstanding on January 1, 1940, the write-down required on the combined population of defaulted and non-defaulted corporate bonds would have amounted to $5,099,000,000 or almost three times the $1,782,000,000 capital losses as indicated four years later.

That this sort of overstatement of capital losses actually occurs upon application of the present system to life insurance company holdings is evident from data reported for fifty-two life insurance companies that account for 82.7 per cent of the assets of all United States legal reserve companies. The peak of their write-offs required by the present system came between 1940 and 1942, when write-offs required for the combined population of non-defaulted and defaulted fixed income securities totaled $640,000,000. This was double the actual losses for the entire period from the end of 1928 to the end of 1948 when losses on sales of securities plus write-down of defaulted issues to market values totaled $319,000,000.

The write-downs on non-defaulted securities to depression values do not cushion the more legitimate write-downs on the issues which actually default. The reductions in ratings which add bonds to the market value category and the declines in market prices of non-defaulted issues both come, like the actual defaults, in the depression. The understatement of aggregate asset values by the present system in depression comes mainly from requiring the write-down of non-defaulted issues along with the defaulted ones. The non-defaulted pay out, thus invalidating the depression market value. The defaulted

probably retain much of the impairment in value that is indicated by the depression market quotations.

Overstatement of income in prosperity.—The present system of valuation contributes to the overstatement of income in periods of prosperity in two ways: (1) It treats a rise in securities market quotations as if it represented realized income to the insurance company. (2) It fails to require in prosperity systematic retention, from current interest and dividend receipts, of amounts to cushion in future years the inevitable asset decline from the maximum prosperity valuations the system has required on both the market and amortized bases.

Let us look first at the matter of market appreciation. All concerned in this problem would doubtless agree that in the long run the income from the investments cannot be more than the difference between the cash invested and the cash received. The receipts consist not only of interest and dividend payments but also the amount of cash received upon disinvestment. The system of valuation, however, affects how this income will be spread over the intervening years. It can attempt a systematic and even distribution over all of the years involved in a given investment. Or it can allow the distribution to be affected unsystematically and unevenly by a factor such as fluctuations in market quotations. For many security holdings this latter method is both artificial and unfair. It is artificial in the sense that life insurance companies must keep invested and hence cannot generally take advantage of general market appreciation in prices. The gains from disinvestment in one security are offset by an equally high price for other securities in which investment must be transferred. The method is unfair, because it allocates this unearned income to periods of prosperity in which, as we shall see, the income may already be overstated. It then requires losses on market write-downs to be taken in a period of depression, which will already be burdened by real losses from defaults. Thus a policyholder who withdraws toward the end of a period of prosperity may have received in dividends amounts which are not realized income, and a policyholder through the subsequent period of depression may find his capital impaired or at least his dividends diminished as the result of the overpayments to the policyholder who withdrew.

The present system not only overstates income in prosperous years because of artificial and unfair additions, but also because it fails to require certain subtractions. Why does the promised yield on corporate bonds exceed that on United States Governments of corresponding maturity dates? Why does the yield offered on the average preferred stock exceed that offered on the average corporate bond?

The answer is, of course, well understood by professional investors and is well established in the literature of the field.[3] The differentials in yield are premiums offered to induce investors to absorb risk of investment mortality. The higher coupon and dividend receipts of good years are then not all income. Some portion must first be reserved against the eventual failure of a fraction of them to pay out. Only then is the income equitably distributed over the various years involved in an investment. Only then is equity preserved between policyholders of different times. By valuing securities in prosperity at maximum values and not providing for retention of assets to replace the probable eventual depreciation from this maximum, the present system allows and even encourages the disbursement of capital as income and fails to preserve equity between policyholders.

An interesting fact is that the present system does to a certain extent observe the principle of requiring systematic adjustments annually for eventual capital change. The system requires that the difference between cost and maturity value of bonds down to Baa in quality grade be amortized. The application of the amortization principle is merely too limited. But the system fails to provide for the amortization of the depreciation below maturity value and below prosperity market quotations that is almost certain to be realized because of occasional defaults.

Possibly the reason for the failure to extend the use of this principle is uncertainty over the exact amount of depreciation that will be suffered and the exact timing of it. After all, the difference between cost and maturity value and the number of years to maturity date of a bond are definite and exact. If this is the reason, the authors overlook three inconsistencies of their position. One is the inconsistency with the record of bond performance. We know from the data gathered by the Corporate Bond Project of the National Bureau of Economic Research that of the corporate bonds issued and extinguished between January 1, 1900, and January 1, 1944, only about a fifth were actually retired at maturity.[4]

A second inconsistency is within the insurance business—more exactly the valuation of the liabilities. It is not known when a man will die. Even the average probability is merely an estimate from which the actual average performance will depart. These uncertainties do not prevent the gradual and systematic accrual of reserve liabilities.

3. See, for example, Arthur Stone Dewing, *Financial Policy of Corporations* (1926 ed.), pp. 1174–80, particularly, p. 1179.

4. Corporate Bond Research Project (see note 1).

The third inconsistency is with the valuation of long-term operating assets in other businesses. The exact life of such assets is rarely known in advance and the amount they will bring in disposition is problematical. The regular annual deduction from income will, therefore, probably overstate or understate somewhat each year's share of the ultimate depreciation. This fact does not deter accountants and the courts from recognizing that assets and income are thereby more accurately stated by deducting estimated depreciation than if no provision were made.[5]

But are life insurance companies investments long-term operating assets? The liabilities of a life insurance company at year end consist mainly of policy reserves carried at less than the face or ultimate liability of the policies represented. However, the financial problem of the company is not merely to have assets equal to or in excess of the *present* valuation of the liabilities. It is so to invest the funds that cash will be available in the *future* to pay off the higher amounts that will ultimately come due. This means that the investments of a life insurance company must be regarded as long-term assets and as operating assets. There is precedence in the financial field for such a "going concern" basis of valuation. It is found in the valuation requirements for assets of mutual savings banks, as approved by the Federal Deposit Insurance Corporation and which have been in use since about 1946.[6]

Harmful effects on the surplus balance.—The present valuation system subjects the surplus balance to unnecessarily wide fluctuations and these are likely to have an adverse effect on investment policy. By surplus, we shall mean here the surplus of assets over liabilities, with the assets valued according to present requirements, with no allowance for future write-downs. (It corresponds to "unassigned funds" plus "below the line" reserves.) Surplus so defined is not permitted to exceed a certain ratio to the liabilities—the New York state limit, for example, is 10 per cent. Within this narrow limit, the surplus balance may fluctuate widely from year to year merely

5. "The very words of the statute, 'reasonable allowance' . . . indicate that estimates and averages are in view rather than demonstrated actualities." *Grant* v. *Rose*, 32 F. 2d 812, 814 (1929), Aff'd. 39F. 2d 340 (C.C.A. 5th 1930), appeal dismissed 283 U.S. 867, 51 S. Ct. 657 (1931).

6. See *Annual Report for 1946* of the Federal Deposit Insurance Corporation, pp. 71–77. Also for evolution of thought on this subject in the banking field, see Harry L. Severson, "Going Concern Value in Bank Examination," and "Valuation of Bank Assets," in *Commercial and Financial Chronicle* (August 24, 1944, and April 7, 1949, respectively; and "A Survey of the Economics of Allowances for Bad Debts on Loans Held by Commercial Banks," *University of Cincinnati Law Review* (January, 1950). And Herbert V. Prochnow, "Bank Liquidity and the New Doctrine of Anticipated Income," *The Journal of Finance* (December, 1949).

from the impact of the valuation system. It is required to bear the full impact of the write-down to market value of defaulted bonds, but also of the write-downs and write-ups of non-defaulted securities required to be valued on a market basis. That practically all these are unnecessary is evident from the fact that most other businesses succeed in avoiding them by the use of a "going concern" basis of valuation in preference to a "liquidation" basis.

That they are likely to have an adverse effect upon investment policy follows from the fact that life insurance company managements have a strong aversion to exhibiting a decline in their surplus accounts. Their investment decisions, therefore, are likely to be colored by attempts to avoid a short-term surplus decline. How can they through investment policy avoid a short-term surplus decline? The risk can be avoided through confining investments to the highest grade short-term bonds, the type bought by banks, not for earning assets, but for their secondary cash reserves. These yield much less than the rate of interest required to produce the policy reserves, and competition for their limited supply would reduce the yield still further. Such a policy of protecting the current balance would not only endanger the future solvency of the policy contracts, but would deprive the economy of much needed financing of long-term business capital needs.

Another way of attempting to avoid the impact of declining market quotations would be to sell bonds during a decline in the market. Such a process involves taking a real immediate capital loss in order to avoid the greater book capital loss that would be suffered upon further decline in the quotations. Not only may such a policy impair the assets, but it would probably also mean reduction in future earning power, for reinvestment would have to be made and in higher grade assets. Not only would such a policy affect the assets and earning power of the insurance companies, but it would also contribute toward instability of the capital market. The dumping of securities on a declining market would accentuate and further that decline in market values. The lower quotations thus engendered would increase the book write-downs and reduce the apparent solvency of those life insurance companies that elected to hold such securities for ultimate work-out.

There is a tendency on the part of some people to minimize the danger to the surplus balances of the impact of write-downs to market value in time of depression. For they see on the balance sheets of the companies only a small amount of securities of the types currently exposed to market valuations. We must keep in mind that many bonds

now rated high enough for valuation on an amortized basis would in depression have lower ratings and increase the category for which the present system would require valuation at market. Also, the reason that the amount of securities vulnerable to current or potential market valuation is small for many companies is partly because the valuation requirements thus discourage their acquisition. Many investment officers of life insurance companies have told me that they avoid medium-grade corporate bonds and preferred stocks that would otherwise be satisfactory for their purposes only because of the possible impact of market valuation on their surplus balances.

Impermanence of the system.—It is quite possible that the state insurance commissioners appreciate the weakness of the present valuation system under depression circumstances. What, then, might explain their complacency? The only explanation that has occurred to me is that they are prepared to change the system under stress of circumstances, but see no point in abandoning the system so long as circumstances are favorable.

There is some circumstancial evidence in favor of this explanation. In the first place, the state laws generally give the commissioners discretion as to the standard of value they impose. In the second place, the commissioners in turn have set up machinery by which their valuation committee can depart from the system they have set up in their valuation resolutions. This is found in the paragraph starting at the bottom of page iii of the June 30, 1950, release of the Committee, mentioned above, "RESOLVED, that in order to meet any unforeseen conditions which may arise, the Committee on Valuation of Securities shall have full power to amend the resolutions regarding market and amortized values which have been adopted at this meeting. Such amendments shall become effective immediately upon their approval by the Executive Committee of the Association." In the third place, the commissioners have made no pretense that their requirements are other than temporary. The resolutions as to valuation are passed each year and apply only to the statements for the current year; they are complete in the sense that they do not rest upon or refer to the provisions of a preceding year; and in fact each succeeding year's resolutions have differed from those of the preceding year in at least some minor respect.

Let us suppose we are suddenly in a year of depression, with business earnings falling off rapidly, followed by some reductions in bond ratings, and a movement downward in prices of medium-grade bonds, preferred stocks, and common stocks. These are all securities vulnerable, currently or potentially, to market valuation. Should a company sell its long-term investments at already reduced market prices be-

cause of the possibility that its surplus may become drastically impaired through the holding of such securities at a substantially lower level of prices? Or should the company gamble that the commissioners will change their valuation requirements? To the uncertainties of the future market there are added the uncertainties as to future valuation requirements. What changes will the commissioners make to alleviate the situation? Will they make them in time? How many companies choosing not to disinvest their income producing securities will needlessly be declared insolvent before the commissioners recognize that the current market prices are too low to represent "fair value"? How much in the way of unnecessary capital loss and loss of income from sale of securities to avoid the impact of further market decline will take place before the Committee realizes the need for action? The fact that during prosperity a system is adhered to which does nothing to build up a cushion for the vicissitudes of depression is little assurance that changes in depression will be made in time. The time is now.

Suggestions for Improvement

It is easily possible to outline a system of valuation that will be more appropriate for the life insurance business. That is, we can suggest a system which: (1) preserves better, or at least disturbs less, equity between different generations of policyholders; (2) encourages investment policies that are healthier for both the companies and the rest of the economy; (3) produces values that measure more accurately, and give more substantial encouragement to, ultimate solvency; and (4) is applicable to depression as well as to prosperity conditions.

Conceptually such a system could be quite simple. It could involve, like the present system, cost or amortized cost for some securities and end-of-year market quotations for others. There would be two important differences: one, in the division of securities between these two basic values; and the other, in the supplementation of these values with reserves for depreciation from them.

Outline of a System.—All fixed income securities on the asset side of the balance sheet such as bonds and preferred stocks in good standing, would be valued at cost or amortized cost. (For such securities already on the books at the time of starting the system, book or "Association value" at that time would be used in place of original acquisition cost.)

All variable income securities, such as common stocks and defaulted bonds and defaulted preferred stocks, would be valued on the asset side of the balance sheet at year-end market.

Offsetting the foregoing asset valuations would be two "above the

line"[7] reserves: one, for possible capital losses on fixed income securities; and the other, for fluctuations in the value of variable income securities.

The limits of the fixed income security reserve would be set according to findings from research on the past capital losses in various classes of fixed income securities. A wealth of data is available from the Corporate Bond Project of the National Bureau of Economic Research and the investment records of the life insurance companies themselves. This reserve would be a sort of graduated reserve, with higher limits for the securities that involve high risk and low limits for those involving little risk.

The limit of the reserve for market fluctuations of the variable income securities would likewise be set in the light of past experience. Offhand, I should say that a limit of 50 per cent of the market value at all times would appear to be about right.

The reserves would be built up at a regular rate out of each year's income until the limit is reached. Thereafter, the same process would be resumed whenever the reserve fell below its limit.

When losses are incurred in fixed income securities either through sale at less than cost or through write-down to market upon default, the depreciation from cost would be charged against the reserve. Until the reserve has been built up to its limit, gains from sale or redemption above book should be credited to the reserve.

In the case of common stocks and defaulted securities, their reserve would be charged with all write-downs to year-end market values and all losses on sale. Whenever the reserve is below its limit, it would also be credited with all write-ups and gains from sale.

When the reserves are insufficient to absorb write-downs, the remaining impact would be on surplus, as before.

So much for the basic nature of the suggestion for a better system. To be complete, many details would have to be set forth and defended. And many alternative ways of arriving at the ends indicated above would have to be explored and compared.

Definition of default.—There is not space for that here. But I should like to throw in ideas on two points, because they might be controversial. One is that default should be defined as simply failure to pay the amount of interest or dividend according to promise. The omission of such words as principal and sinking fund are deliberate. The NAIC Committee should interpret the word "failure" in a realistic rather than a literal sense. What I am trying to say is that the ascertainment of default may be more a matter of financial than

7. That is, not a "surplus" reserve.

legal analysis. To illustrate: let us suppose that an insurance company holds the entire issues of X Company's 4 per cent bonds and Y company's 4 per cent bonds. The insurance company consents upon request to rewriting the old terms, substituting in each case a 3 per cent rate for the old 4 per cent rate. Are these defaults? If financial analysis indicates that Company X had deteriorated financially to the point that it would have had obvious difficulty in paying the old rate, then the Committee should find that the change in that bond constitutes a default. Perhaps financial analysis of Company Y would show that it is able to pay the old rate very comfortably, and is able to call the bonds for redemption and refinance in the market by the sale of a new issue at a lower rate. In that case the change in contract resulted from strength instead of weakness and the insurance company gave up nothing by the voluntary shift that would not have been accomplished at greater expense by both parties through a public refunding operation. To take another illustration: suppose that the insurance company held all of the bonded debt of Q Company and to avoid a default by Q, loaned additional funds. The commissioners would then seem to be on realistic grounds in finding that both the old and new issues should be classed as defaults, even though the flow of interest payments had not been interrupted.

Alternative bases for the graded reserve.—The other observation is with respect to the graded reserve for the fixed income securities. There are various ways of arriving at the goal of building up the reserve to higher amounts for the riskier securities. One way is by classification of the securities into grades such as Aaa, Aa, etc., and attaching different rates and limits for each grade down to perhaps the highest for preferred stocks. Some securities already bear ratings, but many others, such as mortgages, privately placed bonds, and purchase-and-lease-back arrangements, do not.

To avoid the difficulties of classification and still get accumulations substantially correlated with risk, it would be possible to require merely that a certain fraction of the income of any security over a certain basic rate be credited to the reserve for the life of the security or for so many years, whichever was the shorter. Forces of competition in the capital market tend to make for higher yields on the riskier securities, so that such a method would tend to qualify income and build up the reserves according to the probable use of the reserves. The basic rate could be the rate at which the company is required to increase its policy reserves. Another possibility, as a basic rate, would be a so-called "riskless" rate, as say the rate of yield on government bonds of most similar maturity. Under either of these

methods no distinctions would be necessary between real estate mortgages and "securities"; between privately placed and publicly quoted securities; and between preferred stocks and bonds. Whichever basic rate is taken, the Committee should designate whether it should be the current differential in yield or the differential at the time of acquisition of the security. There are arguments for each, which will not be taken up here.

Conclusion.—Let us conclude by summarizing briefly the ways in which the suggested scheme would be more appropriate for the business. The reserving of a portion of the receipts of good years against the eventual impairment in bad years of some of the assets that produced that income improves equity between policyholders of different times and also contributes to future solvency. The system does not have to be changed in depression; and, since there is a limit on the reserves, it is also fair to years of prosperity. The elimination of most of the unrealized gains and losses from income and the graduation of the deductions for capital losses in accordance with the relative risk of loss qualifies the earnings so that the resulting surplus is more nearly a real surplus. With less worry over the short-term fluctuations of the market, the investment officers can concentrate better on the selection and holding of securities for long-term investment. The assets in good years are more conservatively valued, from Aaa corporates down to common stocks and there is less danger of undervaluation in depression. We already have a reserve basis for human mortality; this suggests one for investment mortality as well.

THE VALUATION OF SECURITY HOLDINGS OF LIFE INSURANCE COMPANIES
(Discussion)

HARRY L. SEVERSON*
Housing and Home Finance Agency

IT IS A PLEASURE to be able to comment on so informative and scholarly a paper as Professor Fraine's. Not only does Professor Fraine delineate a number of significant problems, but he indicates the direction in which constructive solutions are to be found. I am in basic agreement with the ideas expressed in this paper, although I would push some of the concepts considerably farther than he does. For instance, I believe that market quotations should be abandoned entirely in the valuation of all assets held by financial institutions which have dollar liabilities. In my judgment, market or salvage values are appropriate only for defunct institutions or those so hopelessly involved that liquidation appears to be necessary.

Professor Fraine's description of current practices in the valuation of securities held by life insurance companies points up what a curious mixture of conflicting theories of valuation is being used. Securities involving risk, which should logically be held for the long pull, are valued on the basis of market quotations at the year-end on the assumption apparently that these securities will be sold; although Governments for which there is a supported market and which can therefore quite properly be counted upon as a source of funds in an emergency are valued at book on the assumption, it appears, that they will be held to maturity. Furthermore with the important exception of Governments and municipals, bonds for which market quotations are available are apt to suffer in comparison with dollar claims which do not usually come to the market place. This reminds one of breaking the thermometer when the landlord refuses to furnish as much heat as the tenant would like. Stated somewhat differently, the accidents of the securities markets control the valuation of the securities and thus, as the executives of the insurance companies are painfully aware, the amount of the "surplus," unless of course the market is so low at the year-end that the rules are changed. The provision for the annual revision of the rules is evidence of the utter lack of confi-

* The opinions expressed in this paper are those of the author and do not necessarily reflect those of the Housing and Home Finance Agency.

dence in the methods of valuation currently in use. This is fortunate, of course, for when rules are based upon pure expediency freezing them might result in disaster at some future date. Perhaps, the best thing that can be said of current practices is that market prices fluctuate so fortuitously that no one will agree to accept them under all circumstances.

This whole thing would be a huge joke if it were not so serious. As long as interest rates remain low and there is a shortage of goods, external events, however, are not likely to bring this weird system into disrepute. In one sense it matters little what method of valuation is used in prosperity since almost no financial institutions are liquidated in good times; but as is pointed out so clearly, there are serious objections to the present system even when business is good. The overvaluing of assets in prosperity is not forthright and like so many intellectually dishonest concepts may have disastrous consequences if taken seriously. The uncertainty concerning valuations inhibits the officials of insurance companies in the placement of their funds. The fear of having to absorb a market depreciation in the future is undoubtedly a factor of importance in keeping insurance companies from investing in ventures that would provide a profitable outlet for the companies and would be constructive from an over-all or social point of view. In bad times a sensible valuation may make the difference between an institution's staying open or being liquidated. It is now evident that the closing of financial institutions that could have been worked out without loss if they had been allowed to continue as going concerns contributed to the vicious circle which culminated in the great depression.

As indicated in my introduction, I disagree with Professor Fraine's suggestion for using market quotations as a basis for the valuation of defaulted bonds and common stocks since these are the very areas where market quotations are apt to fail most completely to reflect long-term prospects and, therefore, the areas where a system based upon cost with appropriate allowance for bad debts can make the greatest contribution. On the basis of the figures presented in the paper, the market at the time of default greatly exaggerated the ultimate loss in these bonds. As Professor Fraine sees so clearly, from no point of view is it wise to force financial institutions "to clean up" in a depression, but I fear that the use of market quotations if not carefully administered will do just that. If a value is used which is based upon cost with an allowance being systematically built up, the situation should be quite different. In so far as the basis for computing the periodic credit to the allowance was sound and the system

was established early in a preceding period of prosperity, the allowance would be adequate to absorb the losses which developed from defaults and therefore there should be no particular pressure for liquidation. The wide swings of the stock market make valuations of common stocks based upon the quotations of any particular day extremely fortuitous indeed.

The method of valuation of securities is but one part of the broader problem of the preparation of financial reports, and this in turn is part and parcel of the still broader problem of supervision. Any improvements along the lines suggested in Professor Fraine's paper would depend, of course, upon accurate and rather detailed financial reporting—income statements as well as balance sheets. In my judgment, a method of valuation based upon book with appropriated allowances for losses would be fairer to the companies and easier for insurance commissioners, although in all probability it would result in stricter supervision. One function of the periodic charge to profit and loss and credit to the allowance is to prevent an overstatement of earnings in prosperity. When a commissioner judges the condition of a company to be deteriorating, he would under this system increase the charge against earnings, thus placing the management under pressure while there is still hope for constructive action. Implicit in such a system would be a clear distinction between solvency and liquidity. If an insurance company does not maintain what the commissioner believes to be adequate liquidity, an appropriate sanction should be invoked, but this should not be in the form of a penalty in the valuation of its assets.

Everything considered, the present is certainly the time to look at this whole group of perplexing problems. When inflation and a shortage of the factors of production plague the economic system, only those institutions which suffer from the grossest forms of mismanagement are under any pressure, with the results that all facets of these knotty and complex problems can be discussed openly and evaluated objectively. Contrast this with the hysteria which is apt to exist when business is bad. As we all remember, during the depression the most trivial incidents sometimes resulted in a run on a number of financial institutions, the effects of which were apt to be extremely far-reaching and disastrous. In such times a frank discussion of the possibility (or implications) of the insolvency of financial institutions would be much too hot a subject for a public meeting such as this.

The imposition of the federal income tax on insurance companies is a practical reason for making a change in the method of valuing assets while prosperity is with us and losses are low, since the annual

charge against earnings and credit to the reserve should properly be regarded as a deduction in computing the income tax liability. It would be ironic if the imposition of the income tax should prove to be a blessing in disguise for the industry by providing an impetus toward sounder methods of valuation and indirectly toward a reconsideration of the best outlets for the funds of insurance companies.

Even though the success of an investment program depends largely upon an accurate forecast of the changing economic scene, too many of the current practices are based upon vestiges of theories developed in an era that is past. I would like to see a serious research study aimed at a restatement of investment principles. Since the differences between banks and insurance companies, for example, are more of degree than of kind, it might be well to extend the study to cover all financial institutions with dollar liabilities. Careful thought should be given to the theory and practice of government supervision. Provision should be made in advance for flexibility to handle as many as possible of the unfortunate eventualities which may have to be faced during the next few decades. There are, of course, many ways in which the allowances for bad debts could be computed, and considerable study is required to work out the implications of each under varying conditions of the economy. Also the federal income tax law should be written and interpreted with an eye to its effect upon the solvency of financial institutions.

To conclude, the future of American financial institutions is only partly in the hands of the officers and supervisory authorities, but this is the very reason that everything possible should be done so that the operation of the financial system will be a constructive influence upon the general economy in the troublous times which undoubtedly lie ahead.

GOVERNMENT FINANCIAL AID TO SMALL BUSINESS

MEETING THE LONG-TERM CAPITAL REQUIREMENTS OF SMALL BUSINESS*

CHARLES H. SCHMIDT†
Board of Governors of the Federal Reserve System

ONE OF THE MAJOR PROBLEMS in the field of small business financing is that of providing long-term capital. Such capital, whether in the form of debt or equity, is required to finance the purchase of fixed assets, to provide a certain amount of working funds for meeting payrolls and carrying inventories, and to serve as security for commercial bank and other short-term credit.

Economic and social developments of the past few decades have noticeably affected the traditional sources of long-term capital for small business. Personal savings of small business entrepreneurs are still available for the launching of new business ventures, but heavier personal and corporate income taxes are taking an increasing share of business profits and leaving relatively less available for reinvestment or "plowing-back" into the business. Meanwhile, a gradual evolution in individuals' savings habits and investment preferences has curtailed such traditional external sources of small business capital as friends of the owner, local capitalists, and business associates.

Considering the practical difficulties of increasing investment incentives through tax reduction, particularly in a period of heavy defense expenditures, or of moderating the investment preference of individuals, some institutional solution to the problem of providing small business with long-term capital must be sought. In view of the special requirements of small business financial aid and the problems encountered in financing small business, it is doubtful if any of our existing financial institutions are equipped to perform this service.

* This article by Charles H. Schmidt and the following two articles by Dan Throop Smith and Herbert E. Dougall were presented at a meeting of the American Finance Association in Chicago on December 27, 1950. The general subject discussed at the session was "Government Financial Aid to Small Business." The program was under the chairmanship of Donald M. Halley, Tulane University.

† The views expressed in this article are the personal ones of the author and in no way reflect the views of the Board.

Criteria for External Financing of Small Business

Provision of long-term capital in the forms in which it is customarily supplied to large corporations would not prove an adequate solution to the financial problems of small business. Increasing complexities of business operation, the sharing in management and consequent loss of independence on the part of the small businessman that external common stock investment entails, and the inflexibility and relatively high cost of traditional forms of long-term credit available to small business all suggest that the following criteria must be met in providing financial assistance.

Financial aid should be accompanied by managerial and technical assistance.—Such studies as have been made of the problems encountered by small business all indicate that the primary source of small business difficulties is incompetent or inefficient management. In numerous instances in which small business owners have attributed their lack of success or failure to inadequate financial resources, it was the opinion of impartial observers that management was primarily to blame. A number of specialized financial institutions that have been established for the primary purpose of aiding small business or of developing new businesses, including the Industrial Development Bank of Canada, the Industrial and Commercial Finance Corporation of England, and the American Research and Development Corporation, have recognized and provided for the basic need of small businesses for managerial and technical assistance and advice. All of these organizations maintain staffs of legal, accounting, managerial, and engineering experts who analyze the operations of their clients and advise them on a continuing basis. Any small business financing institution that did not provide, and perhaps require the acceptance of, managerial and technical advice in conjunction with financial aid would soon find that a large proportion of its loans and investments were supporting inefficient and uneconomical ventures.

Financial aid should not jeopardize owner's independence or control.—External financial aid, if it is to be acceptable to small business, must not entail extensive sharing in ownership or subordination of the owner's management prerogatives. Many would-be individual and larger corporation investors in small businesses are not welcome for the simple reason that their investment would involve the owner's sharing, and possibly losing, control. On the other hand, an institution whose primary objective was that of providing financial aid, even though coupled with managerial and technical assistance, rather than of acquiring ownership or a share in the profits and management of small business concerns, would encounter less opposition. Special

forms of common stock and loan agreements which would limit the financing institution's participation in management decisions to certain aspects of the business' operation might also be employed successfully.

Financial aid should be tailored to requirements of individual business concern.—The form in which financial aid can most effectively be provided depends in large measure on the circumstances surrounding the individual business concern. In some cases debt capital alone might prove adequate; in others common or preferred stock, or some combination of equity and debt capital, would be more suitable. The Industrial and Commercial Finance Corporation has experimented with all types of financing, singly and in combination, and has attracted a good bit of attention in England with what is known as the "ICFC sandwich." Briefly, this may be described as a loan secured by a portion of the borrower's assets coupled with the purchase of preferred stock. This leaves the borrower's working assets free as security for bank loans and strengthens his over-all financial position by the injection of more equity capital.

Terms and conditions of loan capital, as well as the proportion of loan to equity capital, should also be tailored to the requirements of small business, whose earnings are extremely volatile and for whom a rigid schedule of interest and amortization payments might cause unnecessary financial embarrassment in periods of temporarily depressed earnings.

Furthermore, in order that a financing institution may cover its costs of operation and obtain a return commensurate with the risks involved without charging excessive rates of interest on loans granted, it will probably be necessary to provide for some sharing in small business profits through ownership of preferred or common stock.

Problems of Providing External Capital for Small Business

Financing the long-term capital requirements of small business, particularly if the criteria outlined above are to be met, poses a number of cost and organizational problems. These problems were considered at some length in the drafting of the Lucas-Spence and O'Mahoney bills, which were introduced during the second session of the 81st Congress. The capital structure, lending and borrowing powers, and organization of the proposed National Investment Companies provided for in the Lucas-Spence bill, as well as the experience of similar institutions already established, serve to illustrate as well as to suggest solutions to many of these problems.

High costs of investigating applicants and of servicing small loans and investments.—A financing institution that undertakes a complete investigation of all small business applicants for long-term capital would probably find that the cost is disproportionately high in relation to income obtained from loans and investments made. American Research and Development Corporation, for example, received 3,000 applications for financial assistance during the first four years of its existence; of these, half were eliminated in the course of preliminary review. Of the remaining 1,500, each of which involved rather detailed and thorough examination, only sixteen had been finally approved at the time the report was made. While this Corporation is primarily interested in the development or expansion of new technical products and processes, rather than in providing capital to concerns in established industries, similar investigational problems would be encountered by any small business financing institution.

On the other hand, if commercial banks can be relied upon to conduct the preliminary screening of small business applicants, and to pass on only those which have some merit, much of the detailed, expensive, and oftentimes fruitless search for projects warranting serious consideration might be avoided. The commercial banker, though not in a position to advance semi-permanent credit or to make equity investments in small business concerns, is thoroughly familiar with businessmen and prospects in his community. The recently announced loan participation plan of the Chase National Bank, whereby the latter relies heavily upon recommendations of its correspondent banks in selecting loans for participation, is illustrative of the role which commercial banks might play in the operation of a new small business financing institution. This role of the commercial banks was specifically recognized in Section 209 of the Lucas-Spence bill which states that "wherever practicable the operations of a national investment company shall be undertaken in co-operation with banks or other financial institutions, and any servicing or initial investigation required for loans or acquisitions of securities by the company under the provisions of this Title may be handled through such banks or other financial institutions on a fee basis."

To operate most effectively in conjunction with commercial banks, a small business capital financing institution should be privately owned, preferably by the commercial banks and other financial interests in the area which it serves. It was in fact for this reason that the Lucas-Spence bill provided for private ownership, either initially or subsequently, of the proposed national investment companies.

Need for substantial capital.—Provision of adequate managerial and technical assistance, investigation of applicants, and proper serv-

icing of loans and investments require adequate staffing of a small business financing institution with technically qualified personnel. Operating costs, including staff salaries, are bound to be substantial; the Industrial Development Bank of Canada concluded its first year with a staff of twenty-six and operating costs of $111,000. By the end of its fifth year of operation IDB's staff had increased to ninety-nine and operating expenses to $477,000.

Not only are operating costs substantial, but any newly organized small business financing institution would have to count on a minimum of two or three years to invest its funds in higher yield loans and business investments. Both the Industrial Development Bank of Canada and American Research and Development Corporation ended their second year of operation with well over half of their funds invested in government securities and only about one-third in business loans and investments.

In order to insure enough income from government securities to cover expenses during the first few years of operation and to permit sufficient diversification of business loans and investments to compensate for the risks involved in small business financing, the Lucas-Spence bill provided that the proposed national investment companies should have a minimum paid-in capital and surplus of $5 million. Since a minimum capital of this amount was deemed essential to the successful operation of a national investment company, and in view of the difficulties that might be expected in raising capital in such amounts from private sources, the bill further provided that each Federal Reserve Bank might invest in the stock of one or more such companies, but with a view to the ultimate disposal of such stock to banks and other private investors. The total investment of any Federal Reserve Bank in the shares of one or more national investment companies was limited by the provisions of the bill to 2 per cent of the combined capital and surplus of all its member banks or $5 million, whichever is greater. By making the stock of national investment companies eligible for purchase by commercial banks, other financial institutions, business concerns, and individuals the bill sought to insure their eventual private ownership, even though the initial capital might have to come from the Federal Reserve System.

Limited incentives to financing of small business.—The need for some form of tax incentives to the financing of small business has been recognized in both the Lucas-Spence and O'Mahoney bills. The former would tax the proposed national investment companies under the provisions now applicable to regulated investment companies, with modifications permitting the building up of a tax-free reserve equal to 20 per cent of invested capital, and the carrying forward of

losses. An additional amount, equal to 30 per cent of invested capital, could be added to the reserve out of dividend income, against which the 85 per cent dividend-received credit would be allowed. If 90 per cent of the investment company's remaining income were distributed, the company would not be taxed on the distributed income.

The O'Mahoney bill took a somewhat different approach by providing the investment companies with a fifteen-year exemption from all state and federal taxes, except those on real estate. There is a presumption, in the case of the O'Mahoney bill, that the question of taxation would be reviewed at some time during the fifteen-year period with a view to recommending longer-run tax policies consistent with the special requirements of such financing institutions.

Government versus Private Financing of Small Business

Aside from the desirability for close working relationships with commercial banks there are other, and even more compelling reasons, for preferring private to public ownership of any specialized small business financing institution. Unless we are willing to accept the principle of outright subsidization of small business, we must recognize the necessity for providing small business financial assistance on a competitive, profit-making basis. A free enterprise economy presupposes competitive bidding in which the judgment of the market place, be it more or less favorable to individual small business concerns than that of some government official, determines by whom and for what purposes available financial resources shall be used. The small business financing institutions envisaged in the Lucas-Spence and O'Mahoney bills would not only lend and invest their funds on a competitive basis for purposes of making profits, but would compete with other financial institutions and business concerns by borrowing funds in the market in order to expand their financing activities.

If successful, privately owned small business financing institutions would provide an additional investment outlet for individuals' savings, including those channeled into the hands of life insurance companies and other savings institutions. Most institutional investors are not in a position to invest their funds directly in small business concerns, but would probably make funds available to an institution specializing in such financing, particularly if the latter were adequately staffed for the purposes of investigating small business applicants and of providing needed managerial and technical assistance, and providing the scale of the operation assured reasonable diversification of risks.

Importance of Proper Timing and Testing of New Financing Institutions

While the establishment of a new institution to finance the long-term capital requirements of small business has much to recommend it over the longer run, there is a serious question as to whether, in a time of great inflationary pressures such as the present, such action would be desirable. Though the ultimate effect of long-term credit may be to reduce inflationary pressures by enlarging the productive capacity of small business concerns, the inflationary impact of any further expansion of credit at this time emphasizes the need for rigid conservation of financial resources and, for at least a temporary time, postponement of any large-scale endeavor to provide business concerns with additional funds.

Assuming that a small business financing institution of the type proposed in the Lucas-Spence and O'Mahoney bills were to be established at some future time, there is much to be said in favor of starting on a "pilot plant" basis, limiting the number of institutions initially to one or two. For one thing, available evidence on the extent and character of small business financial requirements is largely circumstantial; operation of a "pilot plant" would provide information on the need for additional institutions and the types of financing they would be called upon to supply. For another, operating principles and procedures should be developed through actual experience before launching a full-scale attack on the problem. Finally, until the profitability of operation has been ascertained through actual experience, it is doubtful if private capital can be attracted to this field. If experience proves that a small business financing institution cannot operate profitably, then other ways and means for meeting the long-term capital requirements of small business will have to be explored.

GOVERNMENT FINANCIAL AID TO SMALL BUSINESS: FISCAL POLICY

DAN THROOP SMITH
Harvard University

IN DISCUSSING BRIEFLY that aspect of government financial aid to small business which involves fiscal policy, I shall concentrate my attention on matters of taxation. Government loans and guaranties of loans to small business might be considered as an element of fiscal policy, since in one way or another they may enter the budget. I was pleased to note, however that in the organization of this round table the questions of direct loans and insurance of loans were to be covered separately, and I therefore have justification for concentrating all my attention on matters of taxation. In this particular area, taxation does appear to have special significance, since the maintenance of conditions under which funds are provided through normal private channels seems to me to be vastly more important than the establishment of special government agencies to serve as substitute sources.[1]

Any current analysis of the effects of fiscal policy on the financing of small business must consider excess profits taxation as a major factor. The manner in which this form of taxation discriminates against the establishment of new companies and the expansion of virtually all companies requiring new outside stock financing—a group which includes many small companies—has been extensively discussed during the past few months. I shall not, in the brief time available, attempt to do more than recapitulate the main points on the significance of excess profits taxation for small business because of the literature on the subject already available. The later discussion, however, may give this aspect of the subject the attention which it properly deserves.

The barrier to the establishment of new business posed by excess profits taxation lies in the rate of return allowed on invested capital, which, though it seems generous in an absolute sense, is low relative to the return available on the stocks of established companies. The 12 per cent—calculated before the regular corporate income tax—allowed on the first $5 million of invested capital must be compared with the price-earnings ratios of 4, 5, 6, and 8 existing both for listed

1. The points in this paper are stated very tersely in a form intended to lead to subsequent discussion. This, I trust, is appropriate for a round-table presentation. In other publications, both recent and prospective, I have attempted to develop the necessary elaborations and qualifications for much of the analysis contained herein.

stocks and for the purchase of established closely controlled companies. Under the contemplated 1951 rates of combined excess profits and regular corporate income taxation, a new company would have to earn at fantastic rates before taxes to give *net* returns after taxes equal to, say, 20 per cent on its invested capital. And unless a new company, with all the risks inherent in any new venture, can show promise of such returns, how can it be expected to be attractive to passive investors with free funds who have the alternative of buying into established companies at five times earnings?

An analogous problem exists for the owners of established companies contemplating the sale of additional common stock to outsiders. They are not likely to be willing to sell the stock unless they can reasonably expect to use the proceeds in a manner which will at least maintain the earnings per share of their own stock. Here, again, the relatively low level of capitalization of earnings represented by the present market valuations serves to make it very difficult to carry out stock financing without incurring dilution. When new stock is sold at prices ranging, say, from four to eight times earnings after taxes, the earnings before taxes, even under a 47 per cent corporate income tax, must be from 47+ per cent to 23.5 per cent. An excess profits tax at 75 per cent on earnings in excess of 12 per cent pushes the required rate of return before taxes to truly spectacular levels.[2]

The manner in which excess profits taxation is likely to induce waste and extravagance has been generally recognized. The attitude of management toward marginal expenditures will be influenced by a high marginal tax rate in much more important ways than those usually contemplated under the waste and extravagance concept. Companies subject to a 77 per cent excess profits tax will, for example, have 23-cent dollars which they can use in strengthening their competitive position against other companies not subject to the tax which will be spending 53-cent dollars for similar purposes. Under these conditions many things involving better service, more extensive advertising, greater product differentiation, and even, if it were not for the fact of a general seller's market, competitive price shading, will become prudent and reasonable. They will all work to strengthen the position of existing successful companies.

Excess profits taxation thus, in a variety of ways, appears to be a device to freeze the structure of industry. I take it that any process

2. Though too low to encourage new common-stock financing, the statutory rates on invested capital seem unnecessarily high for other types of financing. For an analysis of possible differentiation in statutory normal rates of return based on source of capital rather than size, see my paper "Role of Invested Capital in Excess Profits Taxation," *Symposium on Excess Profits Taxation* (Tax Institute, December, 1950; to be published shortly).

of freezing will be to the disadvantage of existing small businesses with expectations of growth on a scale requiring new equity financing and will most certainly be to the disadvantage of those potential small businesses which must each year come into being if our country is to be reasonably dynamic.

The principal effect of taxation on small business usually has been alleged to arise from the manner in which high individual income taxation has dried up the sources of capital funds. I shall not attempt to pass any judgment on the complex question of the relative importance of changes in the amounts of current savings and changes in investment policies applying alike to current savings and to previously accumulated capital funds. Changes in policies and attitudes toward various types of investments may be vastly more significant, at least over considerable periods, than changes in current savings. My attention throughout this paper is directed to the various forms of tax-induced changes in the attractiveness of different types of investments.

One general effect of the high level of individual income taxation on individual investment policy is to reduce the net return from any given income before taxes in order to leave a much smaller margin to cover the risk of loss. The spread between the returns after taxes on risky as compared to relatively safe investments may thus be quite inadequate to justify a commitment of funds to the more risky use. For example, the person subject to an 80 per cent tax will have net after tax 0.5 per cent from a 2.5 per cent government bond and 1 per cent from a stock yielding 5 per cent. The difference of 2.5 per cent in the yields before taxes is reduced to a mere 0.5 per cent. To be sure, the relative yield from the two is still the same, the stock giving twice the net return. But to the extent that the absolute rather than the relative differential is significant—and it is altogether logical that it should be significant—the reduction in this absolute differential may be so great as to preclude anything other than the safest uses of funds. The existence of tax-exempt securities as an alternative compounds the problem of securing a reasonable net differential after taxes.

However, when one turns from an analysis of investments in terms of current income to an analysis which considers total ultimate returns, including capital gains, small corporations are found to have many very real and unique advantages. Capital gains are taxed at one-half the rate of ordinary income in the lower brackets, with a ceiling of 25 per cent. Since the individual rate reaches 50 per cent on a taxable income in excess of $16,000, 75 per cent on a taxable income in

excess of $50,000, and 89 per cent on a taxable income in excess of $100,000, the advantage of capital gains is very great for investors of even relatively modest capital funds.

In searching for uses of funds which may lead to capital gains, investments in small closely controlled companies may be much more desirable than investments in stocks of established companies. The advantages in closely controlled companies arise in several ways. All of the corporate earnings may be retained if there is bona fide expansion and no problem under Section 102 covering the unreasonable accumulation of surplus. Though the ultimate value to be realized from the company may not increase directly and fully in line with retained earnings, at least there is a reasonable presumption for such ultimate realization through liquidation or sale, and the prospects in any case may be better than those in a widely owned company where a substantial part of the earnings is paid out as dividends—a use which very high-bracket stockholders are likely to regard as virtually a waste of corporate earnings, since so high a proportion of the dividends is paid in taxes.

The organizers of a closely controlled corporation may also, within limits, provide for a complex capital structure with each investor taking his pro rata share of debentures and common stock. Earnings then may be used to retire the debt, thus in effect enabling the investors to recoup a large part of their investment in a form that does not give rise to income even though it may really involve the distribution of the corporation's current earnings.

A complex capital structure may also be used to great advantage if the common stock is purchased by or otherwise placed in the hands of the youngest members of a family group or in trust for their benefit. By creating a leverage on the relatively small issue of common stock all retained earnings compound to its advantage, with an ultimate saving in estate taxes. For example, if a family group has a total of $500,000, of which $400,000 is in the hands of the older generation, and the total amount is invested in a business venture which retains earnings equal to 100 per cent of the total investment prior to the death of the older group, in most types of investment the members of the older group will have at the time of their death $800,000 subject to estate taxation and the younger group $200,000. But if the investment is made through a closely controlled corporation, with the capital structure designed for the purpose, the older group can take $400,000 of debentures and the younger group $100,000 of stock. Then, at the time of the death of the members of the older group, they would still have property worth only $400,000, while the entire re-

tained earnings would be attributable to the common stock, which would have increased in book value from $100,000 to $600,000, with no part of the increase subject to estate taxation.

At the other end of the life cycle of a small business, taxation also may play a very important part. At this point its effects are almost entirely adverse. Because of the need for funds to meet estate tax requirements, or simply because of the desire to secure funds for diversified investment, many owners of small companies quite naturally wish to withdraw a part of their investment in it. A sale of part of the common stock can always be accomplished subject to capital gains taxation. In many instances, however, owners of small companies do not wish to acquire minority stockholders, nor do they wish to become minority stockholders. For such individuals, a recapitalization is a necessary prerequisite to the sale of a part interest. Such a recapitalization will permit them either to keep senior securities and sell all of the common stock, or conversely, to sell the senior securities and keep all the common stock.

Within the past few years the tax law has developed in a way which virtually precludes most forms of recapitalization in closely controlled corporations. For this and other tax reasons, many owners of closely controlled companies are finding that their best solution is to sell their company completely. Such sales are of course likely to be to other corporations, with the consequent loss of an independent business concern.[3] The effect of taxation on the sales of business and on industrial concentration is the subject of a book by my colleagues Professors Butters, Lintner, and Cary, now in process of publication, and I shall not elaborate on it here.[4]

But in spite of the tax problems arising from the sale or liquidation of part interests in closely controlled corporations, they may be used more effectively to convert income into ultimate capital gains than can investments in ordinary securities. For companies which are expanding, all income can be retained, and even for relatively stable companies capital structures may be set up which will permit earnings to be used to retire debt, thereby increasing the net worth of the equity interest even though the size of the company as a separate entity does not grow commensurately. However, because of the great difficulty which passive investors have in assuring themselves of good

3. The addition of sec. 115(g)(3) by the Revenue Act of 1950, permitting the tax-free redemption of corporate stock in certain specified situations to secure funds for estate taxation, was a move to ease one reason for the sale of closely controlled corporations. It was perhaps too generous in some respects but too limited in its applicability.

4. J. Keith Butters, John Lintner, and William L. Cary, *Effects of Taxation, Corporate Mergers* (Harvard Graduate School of Business Administration, 1951).

management in closely controlled corporations, the tax advantages mentioned above are not sufficient to justify widespread investment in small business by average investors. But for those investors who are in one way or another able to assure themselves of good management, closely controlled corporations justify and appear to be receiving increased attention as investment outlets.

Though the postponement of realization of income through investments in closely controlled corporations and the ultimate realization in the form of capital gains are strong attractions, the present treatment of capital losses still leaves prospective investors in the position where they can in a real sense say that the tax treatment puts the government in a "heads we win, tails you lose" position. Investment losses are treated as capital losses and as such are deductible only against capital gains, with $1,000 of net loss annually deductible against ordinary income. If I were called upon to suggest some single modification of the tax law to encourage investment in small business, and, in fact, in all sorts of risky activities, I would propose that the investment losses be treated much more liberally by being made deductible to a much greater extent against ordinary income.

A very few investors apparently are now in the position where they are deemed to be in the business of investing their own funds. For such people, I understand, losses on short-term debt obligations of closely controlled companies to which they have advanced funds are treated as bad-debt losses, deductible in full against ordinary income, rather than as capital losses. This sort of treatment apparently might have been accorded fairly extensively to investors prior to 1942 when the Internal Revenue Code was amended to emphasize the distinction between business and nonbusiness bad debts which now exists.

The deductibility of losses against ordinary income would greatly change all calculations on the relative attractiveness of different types of investments. A venture which was considered to have roughly only an even chance of success would appear to be relatively quite attractive if ultimate gains from it were to be taxed at 25 per cent while losses would constitute a tax deduction against ordinary income subject to taxation at, say, 75 per cent. Any such treatment would, quite frankly, involve differential tax treatment to encourage risky investment. It might be a very appropriate offset to the tax differentials now in existence which encourage investment in tax-exempt securities and in life insurance, because of the virtual tax exemption of the interest element in life insurance policies maturing through death.

If any modification were to be made in the law, it might most simply be handled by increasing the present $1,000 capital loss deduction

against ordinary income to a much more substantial figure, say, $25,000, $50,000, or $100,000 and applying the full loss without a percentage reduction. Alternatively, the law might be modified to change the present distinction between ordinary debt losses and capital losses incurred on debts which represent investments. It might be provided, for example, that in closely controlled corporations some specified percentage, say, 75 per cent or 80 per cent, of the funds of each investor might take the form of debentures, losses on which would be permitted in full as deductions against ordinary income. It is my impression that over the years a real liberalization of the treatment of capital losses could be a tremendously powerful force in attracting funds into all forms of new ventures, including small business.

GOVERNMENT FINANCIAL AID TO SMALL BUSINESS: SUMMARY AND CONCLUSIONS

HERBERT E. DOUGALL
Stanford University

OUT OF THE WELTER of suggestions, solutions, and proposed legislation concerning the problem of small business financing in recent years certain concrete plans have been set forth which deserve very careful attention. The American Finance Association is fortunate in having authoritative experts in various fields discuss some of these plans in a clear and unemotional fashion.

The basic problem is of course to devise some method whereby the small business concern can overcome the known hazards of high-cost credit, lack of access to the capital markets, or access at a high cost of flotation in its search for long-term funds at reasonable rates, with emphasis on equity capital, without giving up its traditional independence and incentive. In his excellent paper Dr. Schmidt notes the importance of considering an *institutional* source that will not only help to fill the capital gap but will provide the equally important managerial and technical assistance. This proposed source is an investment or capital bank financed with sufficient *private* funds to provide adequate investigation and diversification. Such a company would be dependent on the co-operation and support of commercial banks which would provide the contact with firms needing long-term financing and serve as screening agencies. Prototypes are found in the Industrial Development Bank (Canada) and the Industrial and Commercial Finance Corporation, Ltd. (Great Britain). If private funds are not forthcoming, Schmidt believes that quasi-governmental national investment companies under the sponsorship and initial financial support of the Federal Reserve Banks (together with commercial banks, other institutions, and individuals) should be set up on a pilot plant basis.

It is this plan for capital or investment banks that is stressed by Dr. Kaplan, whose study for the CED, *Small Business: Its Place and Problems,* has provided us with such an excellent statement of the whole small business problem. Dr. Kaplan notes the alternatives of (1) tough private investors turning down the vast majority of applications for financial aid and (2) objectionable direct federal financing with its danger of subsidy and support of the unhealthy. He recom-

mends an extension of the present private banking system to include capital banks operating under the authority of the Federal Reserve Banks, with stock owned by the member banks of the respective Federal Reserve districts. Such institutions would be large enough to provide a good basis for either capital loans or the purchase of redeemable capital stock, on a well-diversified basis. Such institutions were proposed in the Small Business Act of 1950, although in that Act the initial funds were to be supplied by the Reserve Banks, together with possible stock subscriptions by commercial banks and other investors.

Dr. Kaplan's suggestion of bank-owned investment companies is a reasonable compromise that would appear to answer the objection of those who realize that the essential smaller firm lacks access to adequate long-term funds and of those that fear and distrust direct public financing and subsidy. Certain problems would, however, have to be faced in the formation and operation of these new institutions which, in the opinion of the discussant, present rather formidable obstacles to either their financial appeal or to their ability to make more than a small contribution to the presumed great financial needs of four million business enterprises: (1) even banks (provided they are permitted by law to purchase stock in investment companies) would insist on an adequate after-tax rate to compensate for risk; (2) many banks, accustomed as they are to regulation by state and federal authority, would resent the dependence on government authority for the inauguration and continued supervision of the investment companies; (3) the careful screening out of applicants for either capital loans or equity money would eliminate the vast majority of smaller firms about which most of the concern has been felt; (4) the fundamental need of smaller firms for greater "know-how," both technical and administrative, would remain substantially unsolved, although the experience of the Canadian and British capital banks suggests that some contribution could be made along this line.

The proposed Small Business Act of 1950 (ably and fully discussed by Chairman Thomas B. McCabe in the *Federal Reserve Bulletin* [July, 1950], pp. 810–17) involved (1) a business loan insurance plan patterned after the FHA Title I loan principle, and (2) capital banks or investment companies financed (in part) and guided by the Federal Reserve. Mr. W. R. Bimson, president of the Valley National Bank of Phoenix, Arizona, was unable to present his views on this Act at the meeting of the Association, but they are a matter of record in his recent talk at the American Life Convention in Chicago. While Mr. Bimson advocates close scrutiny of the loan insurance and equity

capital provisions of the Act, he suggests that they should be implemented by joint investment by banks and insurance companies in investment companies entirely divorced and removed from public financing, guidance, and guaranties. Note that the same basic idea of "package financing" and joint action is involved here as in the proposals of Schmidt and Kaplan; but Bimson's banks would be purely privately owned and managed investment companies, beyond the purview of the Federal Reserve. (In fairness it should be indicated that this eventual private character is also advocated by some sponsors of quasi-public institutions, including Chairman McCabe and Dr. Kaplan.) Banking and insurance legislation would have to be enacted to permit such concerns to take an equity position in such investment concerns. Mr. Bimson's suggestion meets the approval of many businessmen who do not want more government encroachment in the lending field. Whether such purely private banks would be large enough and profitable enough to attract capital and to make a significant contribution to the need for funds by small business is questionable.

The truth of the matter is that most large businesses find it necessary to produce very high earnings in the pockets of stockholders, after corporate and individual taxes, to offer sufficient compensation for the risks involved in equity financing. Small business has a more difficult problem it is true, but it is the same problem to a more pronounced degree. The basic issue is one of incentive to risk-taking by capital—one which special public or quasi-public agencies may relieve but canont solve. As pointed out by Professor Smith in his excellent paper, an unusually high pre-tax return has to be in prospect for a new company to offer a compensatory rate in competition with the rates earned on the market values of stocks of established concerns. Furthermore, the absolute spread between low-risk and high-risk yields is shrunk to a very small rate by heavy taxation (for the higher brackets), thus encouraging the safest rather than the riskier employment of funds.

As against this sort of disadvantage, Dr. Smith indicates the real advantage to small closely held companies in the special tax treatment of capital gains, and the advantages of a complex capital structure both for liquidation and estate purposes. It is presumed that Dr. Smith is of course aware of the dangers of top-heavy debt that are involved in such financial patterns. And he is careful to point out the limitations of the capital gains advantage involved in the present restriction to $1,000 of capital loss deductions against ordinary income.

Special new financing institutions, special or liberalized tax treat-

ment, and other relief measures, special guaranties of loans, and other new "solutions" are only small nibbles at a problem that goes too deep for superficial treatment, although some relief may be found. The basic problem is a drift away from private risk-taking—a current aggravated and perhaps caused by the uncertainties in the state of the world. One would be a false optimist to expect a reversal of this current in anything but the remote future. Such a change would require a shift in national and individual economic outlook and policy and a resurgence of the pioneering spirit on the part of all groups that comprise the economy. And it would require prospects for a peaceful world.

TAXATION AND BUSINESS INCENTIVE

COMPETITION FROM TAX-EXEMPT BUSINESS*

HARRY G. GUTHMANN
Northwestern University

THIS PAPER IS CHIEFLY concerned with tax exemption as a factor giving certain kinds of business an advantage over competing business units which pay such taxes. The field is so broad as to make anything like a full coverage impossible. Consequently, this paper is limited to the tax exemption factor in two important types of business: the co-operative and the government-owned utility. Chief attention is centered on the federal corporate income tax. The two classifications were selected because of the volume of their operations and their economic and tax importance. With the huge increase in the weight of taxes in recent years, especially since 1940, differential tax treatment can be a decisive factor in giving an exempt business such an advantage over the taxed business as to raise the possibility, if not the certainty, that the former may destroy the latter regardless of its comparative efficiency. Tax immunity permits a business to lower prices to the consumer and to expand more rapidly from retained earnings.

THE CO-OPERATIVES

For the purposes of this discussion, three types of co-operative organizations will concern us, namely, the consumers' co-operative, farmers' buying co-operatives, and farmers' marketing co-operatives. The first two classes, which are most clearly competitive with other existing business units, have certain characteristics in common with the ordinary business corporation:

1. They are ordinarily incorporated and enjoy the legal and business advantages growing out of that status.

2. They are engaged in buying and selling, and frequently engage in manufacturing and processing as well.

* This article by Harry G. Guthmann, and the following two articles by Carl S. Shoup and George W. Mitchell, with discussions by Harold M. Somers, Richard B. Goode, and Robert S. Ford, were presented at a joint meeting of the American Finance Association and the American Economic Association in Chicago on December 28, 1950. The general subject discussed at the session was "Taxation and Business Incentive." The program was under the chairmanship of Miss Mabel Newcomer, Vassar College.

3. They engage competitively in the same fields of business activity.

4. They may pay dividends to their shareholders for the use of capital funds when, and if, they succeed in earning a net income.

They differ from ordinary business corporations in that:

1. Their dividend-rate to shareholders is generally limited, although the rate legally may run as high as 8 per cent, a figure which most stockholders of business corporations would regard as generous.

2. They pay a dividend, or "refund," to patrons in proportion to their patronage when net income permits.

3. The co-operatives may or may not be like the business corporation with respect to the taxability of the net income available for the stockholders. The consumers' co-operatives pay a Federal income tax upon this net income for stockholders: but the farmers' purchasing co-operatives are exempt if they qualify under the law, as are their marketing co-operatives. Furthermore, whatever portion of the net income of any of these types of co-operative is returned or allocated as patronage dividends is not regarded as a part of the balance of taxable net income of the co-operative.

Because of the similarity of operation, the consumers' and the farmers' purchasing co-operative will be considered together. An analysis of the present inequality between these co-operatives and business corporations in tax treatment divides itself into two parts, the exemption of the net income whether actually distributed as dividends to stockholders or retained as unallocated reserves, and the exemption of patronage dividends for both types of co-operatives.

Tax favor to farm co-op stockholder.—With regard to the first, the exemption of the net income after the deduction of patronage refunds, in farmers' buying co-operatives which quality for exemption, we have a clear-cut case of tax inequality and discrimination—class legislation. Persons who put their money into other incorporated businesses, even in consumers' co-operatives, receive no such advantage. Whether the money is invested in a share of a business corporation, or a consumers' co-operative, or a farmers' co-operative, the earnings for such stock are *capital return to an owner* and to fail to tax them all equally is to discriminate in favor of the exempted class. It may be argued that farmers are a specially deserving class, but they include well-to-do as well as poor farmers; and if this exemption is for the benefit of poor farmers, what are we doing for the poor industrial worker who owns a few shares in a consumers' co-operative, or the elderly widow who scrimps along on a small income and owns a few shares in a large business corporation? These latter are also deserving, but their corporations have to pay a corporation income tax upon

the corporate net earnings without regard to the size of the incomes of the individual stockholders.

Varying importance of corporate income tax in competition.— Furthermore, this tax differential makes a considerable difference to business corporations which have to compete with the exempt farm co-operatives, but its importance varies greatly with the kind of business. To illustrate, let us take examples of business corporations in four different fields: retail food merchandising, farm implement manufacturing, gas and oil production and distribution, and electric utility service. The figures in Table 1 are drawn from the 1949 annual re-

TABLE 1

THE RELATION OF FEDERAL INCOME TAXES AND NET PROFITS TO SALES AND STOCKHOLDERS' INVESTMENTS, 1949
(In Per Cent)

	Net Profits to		Federal Income Tax to	
	Sales	Investment	Sales	Investment
Kroger Company	1.7	17.6	1.2	11.8
Deere & Company....	10.9	20.7	8.6	16.3
Continental Oil	11.4	16.5	3.3	4.6
Puget Sound P. & L....	15.7	6.9	6.3	2.8

SOURCE: Compiled from *Moody's Manual of Investments*, 1950.

ports of Kroger Company, Deere and Company, Continental Oil Company, and Puget Sound Power and Light Company, and show the percentage relation of the Federal corporate income tax and the net profit for stockholders to the sales and the investment of the stockholders of the respective companies. (The rate earned on *total investment* would be lower than the percentage shown in the table for all except Kroger Company because of *borrowed* invested capital upon which a low return is paid.) An examination of the percentages in the last two columns shows how large the income tax was in relation to the sales dollar and the stockholders' investment. They should be compared with the first two columns. With the increases in corporation tax rates for 1950 and 1951 these percentages would be correspondingly higher.

What the income tax figures in the next to the last column mean is that an exempt co-operative in the retail grocery business could charge its customers 1.2 per cent less than a competing business corporation and make as much for its stockholders because it has no Federal corporation income tax; in the farm implement business it could charge 8.6 per cent less; in the oil business it could charge 3.3 per cent less; in the electric utility business, 6.3 per cent less. When a co-operative is exempt from the Federal income tax and operates under similar business conditions to that of an ordinary business, it can

pay a patronage dividend equal to the percentage of tax to sales shown in Table 1 and still have as much earnings left over as the ordinary competing business corporation has as its *total* net profit. Such a competitive advantage is obviously substantial, if not overwhelming.

Such figures will vary between companies and in different years. Earnings and tax rates fluctuate. The figures do illustrate vividly the varying importance of the tax factor in merchandising, manufacturing and processing, and in the utility field.[1]

The figures in the last column show how rapidly the capital of a successful exempt co-operative could be built up in good years by retaining earnings derived from income tax saving. If the co-operative could avoid paying stockholder dividends, it could use the sum of the net profits and the tax "savings" for growth. No dividends will be expected in later years on any capital resulting from retained earnings. Most successful farm co-operatives probably rely primarily on this source of ownership capital. One, the Eastern States Farmers' Exchange Inc., showed no capital stock in its balance sheet for December 31, 1949:[2]

Patron's equity:	
Commodity contingency reserve	$ 1,584,250
Portion of 1949 savings retained as a reserve for expansion of facilities and equipment	2,543,348
Accumulated savings retained for necessary operating and capital purposes	11,816,419
Total	$15,944,017

1. The reader interested in average percentages for the various industries will find them in the April, 1949, monthly letter on *Economic Conditions*, published by the National City Bank of New York. Figures for the four industries used here were:

	Net Profits to Sales	Net Profits to Investment
Chain stores: food	1.6	17.8
Agricultural implements	9.9	15.6
Petroleum products	7.6	13.2
Electric power, gas	14.4	9.6

Footnotes to the original table point out (1) that net income includes some investment and other income not related to sales; (2) that return on investment is high because supporting assets are valued below present-day values; and (3) that because a larger part of electric utility investment is funded debt, the return on total investment would be lower than that shown on net assets (or net worth).

2. *Eastern States Co-operator* (April, 1950), p. 18. For the period 1945–1948, 62 per cent of the "savings" or net income was retained, the balance "refunded," that is, paid out as patronage-refunds. Capital stock may also represent retained earnings rather than cash investment. Thus, at the founding of the Unity Co-operative Exchange (Oklahoma) the original member associations agreed to accept capital stock for their part of the earnings until such time as its total amounted to $20 per active local member. *History and By-Laws of the Union Equity Co-operative Exchange: 1926–1948*, p. 10.

To illustrate how the application of the Federal income tax would affect the reported net earnings available for distribution among co-operative members as patronage or stock dividends, some examples may be cited. They represent merchandising, processing, and oil production and refining in varied proportions.

TABLE 2

ILLUSTRATION OF HOW AN INCOME TAX OF 38 PER CENT WOULD AFFECT CO-OPERATIVES IN RELATION TO SALES AND OWNERS' INVESTMENTS, 1949
(In Per Cent)

	Reported Net Income to		After 38 Per Cent Tax	
	Sales	Investment	Sales	Investment
Union Equity Co-operative Exchange*	1.6	40.0	1.0	24.8
Southern States Co-operative, Inc.†	3.3	13.5	2.0	8.4
Eastern States Farmers' Exchange‡	5.1	28.0	3.2	17.4
Farmers Union Central Exchange§	8.2	19.5	5.1	12.1

* Year ended April 30, 1948. *History and By-Laws of the Union Equity Co-operative Exchange* (1926–1948), pp. 11–13.

† Year ended June 30, 1950. Twenty-seventh Annual Report from *Southern States Farmer* (November, 1950), pp. 16–18.

‡ *Eastern States Co-operator* (April, 1950), pp. 16–19.

§ *Farmers' Union Central Exchange Messenger* (April–May, 1950), pp. 15–17.

Applicable tax would probably be less because of petroleum operations, as for Continental Oil Company in preceding table.

The comparative figures for the business corporations help to explain why the farmers' buying co-operatives are and would be expected to continue expansion from buying and/or merchandising operations into manufacturing, processing, oil production, and refining. They also explain why the consumers' co-operatives in urban food retailing have caused less concern to their ordinary business competitors in this country. The income tax advantage is of less relative importance in its effect on the selling price in urban food retailing than in farm co-operatives. Consequently, businessmen have been less interested in the tax position of the urban consumers' co-operatives than in the farm co-operatives. It is also true that consumers' co-operatives in this country have had to meet the competition of efficient chain stores and mail-order houses. In England and Sweden, on the other hand, the consumers' co-operatives were started years earlier and their rapid growth in those countries was the natural outgrowth of their being the first to introduce the economies of mass retailing that were the result of the chain store and mail-order movement in this country. In their growth in England and Sweden these co-operatives have, however, now expanded into manufacturing in a large way.

Clearly the earnings of a co-operative for its stockholders are capital return just as they are for the stockholders of any corporation engaged in business. To exempt farmers' co-operatives, while taxing consumers' co-operatives and business corporations, gives the former a large and unfair advantage in their competition with the latter, especially in these recent years of high corporate tax rates.

So long as Congress permits such a major advantage to farmer co-operatives, it creates a strong inducement for business corporations that serve the farmer to adopt the co-operative form of organization or to shell out to farm co-operatives. By conversion to an exempt co-operative, a tax saving can be gained for paying either patronage or stockholders' dividends. So-called "reserves" may also be set up by farmer co-operatives that would be taxable income for a business corporation, and the co-operative can use such "reserves" for expansion or to maintain dividends in depression times.

Patronage dividends or refunds.—When we turn to patronage dividends, we find that both consumers' co-operatives and farmers' purchasing co-operatives are permitted to treat such dividends as refunds on their sales to customers or members. Consequently, some co-operative spokesmen argue, such amounts are not a part of the net income or net profit of the co-operative. The debate as to whether this payment is "refund" or dividend brings us to the question of whether the co-operatives are not really making profits and distributing them as patronage rather than as stock dividends.

What are the profits of the ordinary business corporation? What is their nature? They are the amounts left over as earnings after the payment of all expenses and the cost of goods sold. The Secretary of the Treasury publishes statistics which show that many business corporations make no profit whatsoever.

The corporations that do earn money derive their profits from two chief sources. The first is ordinary return for the use of money invested in the business; the second is, in some cases, in the nature of an extra return which results from extra managerial skill in the operation of that unit. How does this situation differ from that which creates net income from which co-operatives pay patronage dividends?

Their management states that these co-operatives charge their customers competitive prices much as do ordinary business units. Therefore, if they are able to earn net income so as to pay "refunds" or patronage dividends, what is the source? It is true that some co-operatives are unable to earn income or to pay any patronage divi-

dends but those which do, derive their net income from the same two sources.

Some co-operatives pay very low dividends on their stocks and this, of course, may be called a "savings," which may be used to swell the patronage dividends. Where, as in the case of the consumers' co-operative, the earnings for the stockholders are subject to the corporation income tax, and any dividends paid to the stockholders are taxed as personal income while patronage dividends are taxed neither to the corporation nor the receiver, there is a strong incentive to pay as little as possible as dividends on the co-operative stock and as much as possible in the form of patronage dividends.

From the point of view of economics or business analysis, the source of patronage dividends is the same as that of the dividend which is paid to the stockholder of the co-operative, and both are distributions of the net profits of the business corporation. They stem from the fact that capital tends to earn a return when used in a business, and that there are differences in managerial ability. In addition, there is the differentiating factor that net income available for patronage dividends for the co-operative may stem in considerable part from tax exemption. We have seen above that under recent conditions in the field of retailing, such exemption from the federal income tax would have permitted an exempt corporation to save as much as 1.2 per cent on sales. In the farm implement manufacturing field this saving from exemption would have been over 3 per cent, and in the electric utility field, about 6 per cent of the sales figure.

If then we are to have tax equality, the patronage dividends of both consumers' co-operatives and farmers' purchasing co-operatives, which are like other dividends in their economic origin, and also the income available for such dividends, should both be subject to the same taxes as those levied upon the net income, or net profit, of the business corporation with which they compete.

We have a precedent for this examination of the economic nature of so-called "savings," or patronage dividends, in the practice of the Internal Revenue Bureau which scrutinizes the salaries paid by business corporations to their officers when these officers are also important stockholders. If the Bureau finds the salaries excessive for the services performed, it treats such excess salaries as corporation profits and they are taxed as such. Since patronage dividends for consumer and farm-buying co-operatives grow out of the same source as the profits of business corporations, namely, superior managerial skill and capital return, they should be subject to the same corporation

income taxes. If the co-operatives should choose to pay these amounts to their members as patronage dividends or "refunds" instead of as dividends on stock, that is a matter for their own management to decide. But taxation should be based upon the economic character of the item in question rather than upon a formalistic or legal classification.[3]

An even clearer illustration of this principle is found in the case of *Eastern Carbon Black Company* v. *Brast*.[4] In that case the corporation had sold its products to its stockholders for less than cost and less than market. In upholding the Commissioner's action in increasing the taxpayer's sale price and taxing the corporations net income on the basis of the increased price, the court said:

> In the case of ordinary sales, there is no point in distinguishing between market value and sale price; but, where there is a sale to stockholders below market value, this is in effect a distribution among stockholders and the price obtained is not determinative in computing income, a part of which is thus distributed. The Carbon Black delivered to the stockholders here was worth more than six cents a pound in the hands of the corporation. *When it charged the stockholders less than that amount for it, it was not in reality reducing its income but giving a part of that income to the stockholders. The real income of the corporation can no more be affected by such a transaction, we think, than by the payment of exorbitant salaries; and the existence of a formal contract constitutes no more justification for ignoring the real income in the one case than in the other* [italics supplied].

Tax equality should not handicap co-ops.—Such equality of taxation between these co-operatives and business corporations with which they compete would merely restore equality of position and certainly should not destroy the co-operatives affected. That this should be the case is attested by some of the co-operative leaders who admit that they have equally good management and the ability to carry on successfully in competition with business corporations. Furthermore, some of these leaders have stated that if their patronage dividends were subject to taxes they would lower their prices to their customers by the amount of the patronage dividends and so avoid the question of the taxability of such amounts.

The adoption of such a practice of price reduction wherever the return is higher than needed for stockholders' return would be in line with the practice of the business corporation which reduces its price

3. For the opposite, or "legalistic" view, see W. L. Bradley, "Taxation of Cooperatives," *Harvard Business Review*, XXX, 576 (Autumn, 1947): ". . . the right to exclude patronage refunds from gross income in the determination of the taxable net income of the taxable entity is not a matter of statutory right but rather solely one of contractual right, recognized by the courts whether an organization be set up to function as a agricultural cooperative or to serve the needs of strictly proprietory commercial organizations."

4. 104 Fed. (2d) 460 (Circ. Ct. App-2, 1939).

under the same conditions. The direct lowering of the co-operative selling price rather than the payment of patronage dividends would, as a matter of fact, make for fairer and more straightforward competition and a clearer demonstration of the relative efficiency of the co-operative and other competing business units. Consumers could make direct comparisons of the prices paid when dealing with the two types of organization. Under the present system, the co-operative member never knows the exact price he is paying at the time of purchase because the patronage dividend is in the future and, of course, it may actually never materialize. This element of doubt comes very close to an unfair-trade practice in that it holds out uncertain future patronage dividends as a lure for business. Direct price reductions by co-operatives will make for clearcut competition.

Such price reductions will also make for fair treatment of large and small members and of non-members trading with the co-operative. Some small members and non-members neglect to collect patronage dividends which results in swelling the profits distributable to those who do collect. For example, a non-member drives up to a co-operative filling station, he purchases gas and oil or a tire but may receive no evidence of his purchase. He is sometimes ignorant of the fact that he is dealing with a co-operative, and, in any case, he does not know whether he is dealing with an exempt or a non-exempt co-operative, or, indeed, whether the co-operative is one which pays patronage dividends. The result is that the profit on this business makes possible so much more in patronage dividends for those members who do collect them. This possibility exists as between two co-operative members both receiving patronage refunds if one gets a wholesale price, as on the purchase of a carload of fertilizer, while the other pays a higher price on smaller lots.

Federal taxation should neither favor nor discriminate against the co-operative on the one hand or the business corporation on the other, but give equal treatment to each so that in their competition for the public favor the more efficient units of either class may survive as a result of their giving the ultimate consumer the benefit of the best service at the lowest prices.

Since the patronage dividends of the consumers' co-operatives and the farm-buying co-operatives, when they exist, are derived from the same source as the business profits of the ordinary corporation, they should be taxed as income to the recipient in the same manner whether the membership chooses to take them as patronage dividends or as dividends upon their stock.

Farm-marketing co-ops.—There remains the question of the treat-

ment of the third class of co-operatives, namely, the farm-marketing co-operatives. The dividends which are paid on the stock of these organizations are as clearly a return for the use of capital as the return paid by any of the other forms of co-operatives and should be consequently taxed as such. The income which makes such dividends possible should be taxed as such at the same rates as paid by the business corporation. Under the present law, however, this form of co-operative pays no income tax on the income earned for either stockholders' or patronage dividends if it qualifies for exemption under the law.[5]

Most marketing co-operatives pay their members the going-market price for their crops at the time they are delivered to them.[6] Then, at a later date, an additional distribution, usually called a patronage dividend or refund is paid. This extra distribution arises from business operations, such as marketing, processing, or manufacturing. Profits from such business operations are not a return for the farm crop but an ordinary business profit, which should be subject to the same corporate income taxes as that paid by non-co-operative competitors.

A further point to note is that some marketing co-operatives do not distribute full proceeds to their members but retain a portion for a number of months or even years after the crop season is over. Such retention is clearly an attempt to obtain the use of additional capital without paying any stock dividends or interest for the use of capital.

Farm-marketing co-operatives are able with the aid of government agencies to borrow an unusually large proportion of the capital which they need to conduct their operations at a very low interest cost. Consequently, their need for capital from their farmer members is relatively small in relation to the volume of marketing operations which they carry on. Yet in order to obtain such ownership capital as they do need, frequently for supplementary operations, elaborate schemes such as the revolving fund are frequently resorted to to obtain the needed stockholders' investment. Discussion of such a revolving fund arrangement may be found in government bulletins, such as the *Bulletin of the Farm Credit Administration* on Legal Phases of Co-operative Associations (No. 50 [May, 1942], p. 276, etc.). The author of this bulletin believes that this retention of funds to operate the

5. For the qualifications required for exemption, see Bradley, *op. cit.*

6. Where the co-operative makes only a partial payment for the crop upon receipt, the amount paid at a later time may include an element of "capital return." The co-operative has had the use of the funds while the crop was being sold and sometimes it pays a subnormal dividend on its stock. However, it is doubtful if any practical analysis can be made to determine the amount of the "profit" or "capital return" element when it is merely a part of the ordinary crop proceeds.

business is equitable because it solves the problem of how "to capitalize a cooperative so that the capital furnished by a particular member will bear a direct relation to his patronage." Clearly the raising of capital from members by this method reduces the need for selling shares upon which stock dividends will be paid, and so members can receive all of their capital return in their patronage dividends. Unless patronage dividend income is taxed like corporate income so much capital return is given an exemption.

As the writer of this bulletin says: "It cannot be overemphasized that it takes money to go into business. Farmers, when they form and operate a cooperative, are in business and should supply the required capital" (p. 276). When farmers go into a business which is not farming, it is difficult to understand why they should expect to be free from the taxes paid by other operators in that field. Furthermore, it would be unfair to permit them to create a form of ownership investment that will make it unnecessary to show much of their profits for dividends on stock and enable them to avoid the corporate income tax by distributing such profits as patronage dividends. One of the reasons that these co-operatives have to resort to these schemes for retaining proceeds to provide ownership capital is their failure to pay dividends on their stock adequate enough to attract investment by members. The deficient capital return is then paid out as patronage dividends. This device for avoiding the payment of dividends shows how ineffectual a change in the tax law would be that only taxed the income available for dividends on stock and why many farm co-operatives even now do not claim the exemption from this tax. They pay little or no dividends at all on stock and make most or all of their profit distributions at patronage refunds. The possibility that all of the owners' investment may consist of retained earning was illustrated earlier. Such balance sheets as have been examined show a predominance of capital from that source.

Where the marketing co-operative pays its members the going-market price upon delivery of the crop, it would appear equitable, then, to require the co-operative to report all further net income over and above that price as business profits earned for its members and to make them subject to the same corporate income taxes as are paid by other business concerns. Where the farmer member is only paid as the crop is sold by the co-opreative, it may not be possible to apply this method of determining the business profits, if any. The basic principle should be to segregate the amount representing the crop return from the revenues produced by the off-the-farm activities. The co-operative should be obliged to distribute the crop return within a

reasonably short period after sale. Any amounts not distributed promptly should be treated as corporate earnings and taxed as such. Such taxation would put pressure upon the co-operatives in the future to obtain their capital needs, other than that which is borrowed, by selling stock and paying a reasonable dividend upon the same in order to induce such investment on a voluntary basis. When, and if, co-operatives paid an income tax as other business corporations do, their retention of earnings would arouse no more objection than the similar practice of other corporations.

Before concluding, it should be emphasized that such equal tax treatment is in no sense a hostile measure directed against this form of business organization. They have played a useful part in the American economy, especially in the field of agriculture. They have made a valuable economic contribution. However, many of them are no longer small struggling institutions but vigorous mature business units. On the basis of Farm Credit Administration reports of farm co-operative business at the local level of $8,635 million for the marketing year 1947–48, one estimate, after allowing for non-reporting organizations, wholesaling and manufacturing and commission operations, arrives at a total in excess of $15 billion.[7] The economic contribution which private profit-seeking enterprises have also made to the American standard of living should not be overlooked. They, too, have brought improved productive technology and mass marketing methods to the service of the consumer.

Summary.—A summary of the various foregoing proposals for changing the income tax law to place the different types of cooperatives on a basis of tax equality would be as follows:

1. For consumer co-ops, the amounts distributed in cash or allocated as patronage dividends should be included in the taxable net income of the co-operative and made subject to the same corporate income tax as the return earned for its members on their stock investment. Similarly, patronage dividends should be regarded as a part of the recipient's personal income and taxed as such.

If these amounts are not genuinely capital returns, the remedy for the consumers' co-operative is simple. The co-operative may reduce its prices in the same way as would a business competitor.

2. For farm-buying co-operatives, similar treatment of patronage dividends and stockholders' earnings would be the fair course. They, too, should pay the corporation income tax on such amounts of net income as are available for the payment of either patronage or stock-

7. National Tax Equality Association, *Facts and Figures*, p. 47. A statement to the Committee on Ways and Means of the House of Representatives, 81st Congress (Chicago: The Association, 1950). In this source, a net income of approximately 2 per cent is estimated and the income taxes escaped at $318 million (p. 35).

holders' dividends. Members are now liable for a personal income tax on both types of dividends.

3. For farm-marketing co-operatives, the corporation income tax should be levied upon any balance earned to pay dividends to stockholders and, when the co-operative pays the farmer the market price of his crop at the time of delivery, any further payment, even though called a patronage dividend, should be taxed like stockholder income available for dividends. In instances where the co-operative advances initially only a portion of the value of the farmers' commodities rather than the market price, it would be reasonable that no income tax liability should attach to funds disbursed within a reasonable period of time after their sale by the co-operative in order to bring the total up to that market figure. However, any additional amounts which represent net earnings from the operations of the co-operative, whether from marketing, processing or manufacture, should be treated as taxable net income regardless of whether or not they are distributed.

Government-Owned Electric Utilities

As might be inferred from material already presented, the tax factor is also of first-rate importance in the field of government-owned utility operations. While direct competition of government-owned and privately owned utilities is the exception, comparisons, an indirect competition for public favor, are common between the two groups in such a field as electric power where both types of ownership are found. The fairness of such comparisons is an important question. With the publication by the Federal Power Commission of the first volume of its *Statistics of Publicly Owned Electric Utilities*, data became readily accessible for our study. The figures for 1948 show a gross electric plant investment amounting to $1,297 million plus $338 million of other utility plants, exclusive of federal power projects. Gross electric revenues were $283 million. The importance of taxes to the showing of these municipal electric utilities can be seen from the ratio of that item to revenues. Their total taxes amounted to 2.0 per cent of gross revenues; similar private companies (Classes A and B) reported federal income taxes amounting to 7.3 per cent and other taxes amounting to 9.6 per cent, or total taxes of 16.9 per cent of electric utility operations in 1948.[8]

If a municipality that does not compete with any private company

8. Federal Power Commission, *Statistics of Electric Utilities in the United States* (1948), p. 10, and *Statistics of Publicly Owned Electric Utilities*, p. 8. On the other hand, some allowance should be made for those municipalities which are supplied with power from their own plants without any bill being presented which might be regarded as the equivalent of a tax for some analytical purposes. For similar private utilities, such power use would provide additional gross revenues.

chooses to give its owned project favored tax treatment, that is its privilege, although it destroys the comparability of its rates with those of neighboring privately owned companies to that extent and increases the amount of revenue which that community will have to raise from other sources. The effect is to shift so much of the local tax burden from one form of levy to another. Escape from the federal corporation income tax, however, relieves the community served by a municipal utility of its share of the federal tax burden as compared with those served by private companies. Since power rates are tailored by regulation to produce a stipulated rate of return on investment, it is apparent that the situation in 1948 was as though consumers using private power from a company subject to the corporation income tax were paying an excise tax averaging 7 per cent which municipal power consumers escaped.

If all of the "savings" from lower taxes were passed along to consumers, tax equality would pose a difficult problem. Actually, the publicly owned electric utilities report a substantial net income after their operating expenses and interest charges. Had they paid a 38 per cent tax on their combined net income in 1948, it would have totaled $31,464,000, or 11.1 per cent of electric revenues. This per cent is high because it is related to electric revenues only. The net income from other utility operations is only reported on a net basis. Were total utility revenues assumed to be proportionate to gross plant investment in electric and other utility property, these income taxes would have been but 8.8 per cent of revenues or a figure more nearly comparable to that paid by private companies.

Three other tax factors should also be mentioned: (1) many of these municipal utilities purchase power from federal hydroelectric projects, which enjoy a special tax position; (2) municipal utilities are financed by the sale of tax-exempt bonds; and (3) between June 13, 1933, and June 1, 1939, the Public Works Administration gave some communities 45 per cent of the cost of setting up their own electric supply systems and lent them the balance at a very low rate of interest. In this period, the PWA lent over $96 million and gave over $95.6 million to 477 non-federal bodies.[9]

Federal power plants represent about one-half of the government-owned electric capacity of the country and produce a substantially higher fraction of the public power sold. The four hydro giants—The Tennessee Valley Authority, Grand Coulee, Hoover (Boulder) Dam, and Bonneville—represent almost a billion dollar investment in elec-

9. Ernest R. Abrams, "Municipal Ownership of Utilities Declines," *Barron's* (September 4, 1950), p. 39.

tric plants. They pay no federal income taxes and make only a small contribution, if any, to local taxes. As for return upon their capital investment, they are under no obligation to earn any stipulated rate or even anything at all. No interest charges may appear in their operating statement. Even when such a property does reach the point where it returns to the Treasury an amount sufficient to equal what the federal government pays for its borrowed funds, currently under 2.5 per cent, it has the same general advantages that the municipal utility has over the private utility of very low capital cost and nominal taxes.

Capital costs and income taxes may constitute three-fourths of the costs of power generated by a similar private hydroelectric development. Here is a very high "saving" for the utility able to buy federal power. The amount is unknown and hidden from the casual reader of operating data of the municipal utilities affected. To put the cost of federal power on a parity with private power—especially if any "yardstick" usage is intended—the government should charge rates sufficient to cover not only a reasonable return on the capital invested in utility property but also an amount equal to the corporate income taxes lost by supplanting private investment and operation.

Because a municipal utility uses no stocks in financing its needs, its cost of outside funds is represented by the rate paid in its bond issues. For 1948, the interest charges represented an average rate of 3 per cent on total debt. This rate is a composite of rates on past financing. Currently lower rates are available for such tax exempt bonds. For example, the Public Utility District No. 1 of Clark County, Washington, recently sold a serial electric revenue bond issue with yields from 1.20 to 2.35 per cent on maturities from 1951 to 1977, and an average cost of approximately 2.25 per cent. The Consumers Public Power District of Nebraska sold Western System serial revenue bonds with yields from 1.10 to 2.00 for maturities of 1953–80. In contrast, the private utility not only pays a higher yield to borrow with non-exempt bonds but also is obliged to raise a substantial part of its funds by the sale of stock. The over-all average rate of return currently regarded as necessary for a private electric utility to maintain its credit and raise new funds usually runs at the present time from 5.5 to 6 per cent. What this means is that the ability to use tax exempt bonds instead of taxable stocks and bonds makes it necessary for the private utility to pay from two to three times the rate needed by a municipal utility. Even this statement ignores the net ownership equity of the municipal utilities accumulated from past surplus earnings or a PWA grant upon which it may feel no obligation to earn any return. At the

end of 1948, municipal electric utilities had a total funded debt of $624 million and ownership equity of $754 million, $98 million representing investment of the municipality and $656 million representing surplus.[10]

Differences in capital cost become more significant when we recall the point made earlier that the capital return cost for utilities is a substantial item in the total cost of the service. This total capital return (interest plus return earned for stockholders) constituted 18.7 per cent of revenues for private electric utilities in 1948; 30.6 per cent in 1940. If it is assumed that the average municipal utility has a capital cost of one-half that of the private company, it could under comparable operating conditions reduce that cost from 18.7 to 9.3 per cent of gross revenues and pay only 2.0 instead of 16.9 per cent for taxes. In effect, these two "savings" would permit rate schedules 24.2 per cent lower for the municipal utility operated at the same level of efficiency.[11] Or, stated in the reverse fashion, such costs if added to the other necessary costs of a municipal plant would raise its rate structure by 32 per cent (24.2 + 75.8). In practice, the municipal company does not pass along all of these "savings" in lower consumer rates but uses them to build a net worth or surplus of property investment over debt. Consequently, were municipal companies obliged to pay an income tax, it would not necessarily have to increase existing rates. It might merely reduce the amount available for the expansion of ownership investment. It might even lead to rate reductions by municipalities anxious to avoid the income tax. They would then be obliged to finance more of their expansion by bonds and less by retained earnings.

Clearly, here is a field of business where tax exemption is even more important than in the case of the co-operatives studied above, when comparisons are being made between exempt and taxed business units. Tax equality would at the least require (1) that municipal utilities be obliged to pay an amount equal to the federal corporate income tax rate upon any net income whenever it serves a field in which privately owned companies operate, and (2) that the interest from all future issues of bonds sold by such municipal utility properties should be fully subject to income taxes for the recipient of such interest.

10. Federal Power Commission, *Statistics of Publicly Owned Electric Utilities*, 1948.

11. This comparison omits the greater advantage previously referred to from both lower capital cost and tax exemption where hydroelectric power is employed. This advantage arises from the larger part these two elements play in hydro as compared with steam power. While municipal utilities are given preference in the sale of federal power, some private utilities are able to purchase it where municipal plants are unable to absorb the total available.

Something approaching tax equality is necessary if discrimination between taxpayers who buy from municipal and private utilities is to be our objective. Furthermore, any comparisons between rates of municipal and private utilities are meaningless in the absence of more equal tax treatment.

A corporate income tax could be avoided by a municipal utility willing to pass all "savings" along to consumers through reduced rates. This possibility poses the question as to whether a more equitable arrangement would not be to exempt all regulated utilities from the income tax, whether public or private, and levy a common excise tax upon the revenues of both that would yield the desired total revenues from this sector of the consuming public.

Conclusion

Co-operatives and government-owned utilities have been selected for discussion because they were deemed the most important to the problem of tax exemption as a competitive business factor. The problem in the case of certain financial institutions, notably insurance companies, involves more complex and technical matters. Whenever tax burden is laid upon such institutions, the same general principle developed here would seem applicable. The objective should be to produce an equality of tax burden within a given competitive field so as to avoid favoring one corporate form of organization over another. To achieve that end, economic analysis is essential to avoid inequity growing out of legalistic differences. Fundamental economic similarities should be emphasized. Thus, if mutual savings banks were to be regarded as competitive with commercial banks, it would appear equitable to permit them to deduct payments to depositors that are the equivalent of interest in arriving at their net taxable income even though such a payment is legally called a "dividend" under their mutual form of organization.

Because the weight of taxation has become so heavy, the greatest care is essential that it be not used to handicap some business organizations at the expense of others. Failure to exercise such care might so blight the competitive process that it will cease to bring about the survival of those units which serve the community with the greatest economy of resources. As between its own and private enterprise, the government can readily discredit private operation, especially in the utility field, if it chooses to tip the scales in its own favor with discriminatory taxation as it does at the present time.

COMPETITION FROM TAX-EXEMPT BUSINESS
(Discussion)

HAROLD M. SOMERS
University of Buffalo

TAX EXEMPTION IS A POWERFUL weapon of economic policy. In order to make use of it with optimum economic effect yet without encountering constitutional barriers the fiscal authority must be discriminating without being discriminatory; it must be economically selective without violating legal prohibitions. The task of accomplishing this may seem to be impossible, yet many types of tax exemption do exist in our tax structure with full constitutional sanction.

The major types of tax exemption are: (1) the exemption from the individual income tax of those incomes that fall below a certain level; (2) the exemption of certain governmental bond interest from income taxation; (3) the partial exemption from property taxes granted certain persons, such as veterans; (4) the exemption from property taxes granted new businesses in some localities; (5) the exemption from either property taxes or income taxes or both granted to co-operative enterprises, governmental agencies or religious, charitable, or educational institutions; and (6) certain exemptions granted to firms operating in foreign countries.

We are concerned here with those tax-exempt entities which engage in business in competition with firms that are subject to taxation. The question involved is whether and to what extent tax exemption gives the tax-exempt enterprise a competitive advantage over the taxable enterprise.

Professor Guthmann has quite reasonably confined his paper to a description of the exemption from the federal income tax enjoyed by co-operatives and government-owned utilities. Since the questions he raises are of fairly broad application, however, we may first supplement his remarks by reviewing briefly the provisions of the Internal Revenue Code which deal with exemption from the federal income tax.

LEGAL PROVISIONS CONCERNING BUSINESS INCOME EXEMPT FROM THE FEDERAL INCOME TAX

The Internal Revenue Code provides that the following types of corporations are exempt from the federal income tax: non-profit cor-

porations such as charitable, religious, and educational institutions, civic leagues, and social clubs; and co-operatives which operate on a patronage basis.[1] In deciding whether any income is exempt, the purpose for which the corporation is operated is the governing factor. The mere fact that income such as rent, dividends, and interest is received does not in itself void exemption provided that the income is used for the purposes for which the exemption provision is set up. Similarly any incidental profit received on transactions does not void exemption provided that financial gain was not the purpose for which the transaction was undertaken. In general the corporation itself must be within the exempt class. The mere fact that the corporation is owned by another corporation in the exempt class does not exempt the income of that first corporation from taxation.

Several examples of court cases may serve to illustrate the conditions under which income tax exemption is granted. In one case a public utility was held to be not within the exemption granted to educational institutions even though it was wholly owned by a university which had such exemption. In another case it was established that if the utility were organized for the sole purpose of producing revenue for the university, it would have been eligible for tax exemption. Recent decisions have narrowed somewhat the range of tax exemption. There have frequently been cases in the past where tax exemption was acquired through the transfer of a corporation's stock to an exempt corporation or through putting the stock in trust with an exempt corporation as the beneficiary. Recent decisions, particularly the celebrated Mueller Macaroni case, have emphasized that the source or the nature of the earnings is important. If the income is ordinary business income it is taxable even though it is to be paid over to a tax-exempt organization. Tax-exempt status is lost completely if the institution engages in certain "prohibited transactions,"[2] or if it uses its income in a manner prohibited by the Revenue Act of 1950.[3] The test is whether a "substantial" portion of the income or assets is devoted to prohibited purposes.[4]

1. Internal Revenue Code, Section 101. For citations of court cases see George T. Altman, *Federal Tax Course, 1950–51*, paragraphs 2239–40.

2. Internal Revenue Code, section 3813.

3. Internal Revenue Code, section 3814.

4. Even where the corporation retains its exempt status it may lose exemption for part of its income under the Revenue Act of 1950. The income taxable in this way is known as "Supplement U" which comprises income obtained from (*a*) the operation of a business enterprise which is unrelated to the purpose for which such organization received an exemption or (*b*) rentals from property leased to others on a long-term basis (that is, more than five years), where the lessor incurred any indebtedness as a result of the purchase or acquisition of the property, or as a result of an improvement to the property, provided that any part of the indebtedness is still outstanding at the end of the taxable year. The leases referred to here are known as "Supplement U leases" and

This provision in the tax is intended to reach unrelated business earnings of labor organizations, educational and charitable organizations including hospitals and research foundations and business and trade associations. Churches and associations of churches are specifically exempted. Moreover mutual type organizations such as farm co-operatives, building and loan associations and mutual insurance companies (other than life or marine companies), or fraternal beneficiary societies, civic leagues, and social welfare organizations are not affected by these new provisions.

The basic criterion of taxability is whether the business activities are related or unrelated to the main purpose of the exempt corporation. Among businesses that would probably be considered related are the operation of a university press or the sponsoring of athletic contests. Corporations and associations are taxed on their unrelated business income at corporate rates while trusts are taxed at individual rates.

Economic Effects of Tax Exemption

What are the effects of income tax exemption? The key to Professor Guthmann's position is found in his statement that "tax immunity *permits* a business to lower prices to the consumer and to expand more rapidly from retained earnings" (italics added).[5]

The question we raise is whether the tax-exempt enterprise will *actually* decide to lower prices. Whether the tax "permits" price cuts is a matter of arithmetic; but whether the enterprise will actually engage in price cutting because of income tax exemption is, unfortunately, a matter which brings us into the theory of the incidence and effects of the business income tax.

We must first recognize the fact that in some cases this problem is academic in that the tax-exempt enterprise does not compete in the same market as the taxable enterprise. With respect to utilities Professor Guthmann states ". . . direct competition of government owned and privately owned utilities is the exception. . . ."[6] One of the points

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the indebtedness is known as "Supplement U indebtedness." (I.R.C. Sections 421–423). In so far as the exempt organization invests its own funds in the property it acquires the exemption. In other words, in so far as the organization pays back its indebtedness, it acquires the exemption.

5. Professor Guthmann's statement is mild compared with some that are made. Compare: "This subsidy is slowly but surely strangling free enterprise and free markets, and continuation of federal income tax inequalities can result only in the eventual death of private enterprise" (Ben C. McCabe, "Big Business without Taxes," *National Tax Association, Proceedings, 1945* [279–287], p. 279).

6. There are some cases of direct competition, of course. One private power company representative has said, "I am associated with a power company—a private tax paying power company—in Washington. We are in direct competition with Bonneville. Bonneville pays no taxes—not one dime" (Arthur E. Becker, in discussion, *National Tax Association Proceedings*, 1948, pp. 314–15).

he makes is that comparisons between the two are made as to efficiency and that the government-owned utilities are used as "yardsticks." This in itself is not a sufficient basis for imposing taxes on municipally owned utilities in violation, in part, of constitutional precautions against one level of government dominating the others through taxation. If statistical abuses occur, a much more appropriate remedy would be to make proper adjustments for income taxes in any comparison between taxable and tax-exempt companies. Statistical abuses do not provide a sufficient basis for formulating tax policy. (Professor Guthmann does, however, make a significant point in suggesting that customers of tax-exempt utilities escape a share of taxes imposed on taxable utilities.)

In cases where direct competition does exist between taxable and tax-exempt business, Professor Guthmann believes that the tax-exempt business has a competitive advantage. In support of his position, he compares the percentage of federal income taxes to sales and to investment in certain taxable business corporations. He suggests that a tax-exempt co-operative in similar lines of business could charge lower prices to the extent of the income tax, and still have as much left over for stockholders. He states "Such a competitive advantage is obviously substantial if not overwhelming." The advantage would be in the form of either lower prices at the time the sale is made or patronage dividends at the end of the accounting period.

The extent to which there would be a competitive advantage in practice would depend partly on whether there actually was a lower price in advance or whether the lower price took the form of patronage dividends distributed later.

If the lower price of the co-operatives takes the form of a patronage dividend, that is, if the price initially charged is the same as that of the taxable business corporation but there is a rebate at the end of the year, there is a real question as to any competitive advantage. The question is whether an unknown and uncertain patronage dividend to be paid at the end of the year has the same effect as an immediate reduction in price at the time the sale is made. The prospect of a patronage dividend will probably affect purchases but the effect can hardly be claimed to be the same as if there were known in advance to be a certain reduction in price equal to the income tax computed at the end of the year on the sales that actually took place during the year. A patronage dividend may be regarded as an *ex post* reduction in price and its effects on sales cannot be assumed to be the same as if it were an actual reduction at time of sale. This is especially important since, in fact, patronage dividends are sometimes not paid at all.

Professor Guthmann admits, "It is true that some co-operatives are unable to earn or to pay any patronage dividends. . . ." He also emphasizes that patronage dividends are mainly in the form of a return of profits. He admits, "Under the present system, the co-operative member never knows the exact price he is paying at the time of purchase because the patronage dividend is in the future, and, of course, it may never actually materialize."

The co-operatives also claim that the money which ultimately becomes patronage dividends is really the property of the patron and may be regarded as debts; hence patronage dividends are repayments of debts. The statement which follows points up this attitude, "Farmer co-operatives can never compromise the basic issue as to whether debts honestly contracted and owing can be treated as income to the debtor for tax purposes . . . we do not believe that Congress has either the desire or the power to include as income, by definition, sums which are not even the property of the taxpayer to whom such income is ascribed. If the need arose, this issue would be carried to the Supreme Court, and to every farm, village and city as well."[7]

Another contention that is sometimes made is that it would not be appropriate to tax the co-operatives that deal with business firms because the benefits derived from the co-operatives are declared as income by the patron firms. A representative of the co-operatives says "The primary object of most co-operatives is to increase the income of the businesses they serve, thus also increasing their income tax payments."[8] He goes on to say, "Just as the great integrated industries combine the profits and losses of all subsidiary corporations, branch plants or integrated units into a single consolidated income tax return, so each of the businesses patronizing a co-op is required to consolidate its share of the savings realized through the co-op into its individual return." The answer to this takes the following form: "The current co-operative claim that because dividends are taxable in the hands of recipients, profits may not also be taxed in the hands of the corporation, falls of its own weight in view of the existing 'double taxation' of corporate income. Such double taxation may constitute an inequity, but it is in accordance with the law of the land and to fail to enforce the law on co-operatives, too, is to create an inequality and an undue preference for one form of business at the expense of another."[9]

All considered, we cannot regard the effects of patronage dividends

7. R. Wayne Newton, "Corporation Income Taxes as Applied to Co-ops," *National Tax Association, Proceedings, 1945* (270-278), p. 278.

8. *Ibid.*, p. 271.

9. McCabe, *op. cit.*, p. 282.

as equivalent to the effects of a price-reduction. The prospect of unknown and uncertain patronage dividends cannot give the co-operative much of a competitive advantage at the time the sale is made.

A related question is whether tax exemption gives co-operatives a competitive advantage in attracting capital funds. In comparing co-operatives with ordinary business corporations Professor Guthmann states: "Their dividend rate to shareholders is generally limited, although the rate legally may run as high as 8 per cent, *a figure which most stockholders of business corporations would regard as generous*" (italics added). This limitation may, however, introduce a substantial difference under present conditions. A large number of common stocks of taxable corporations currently yield more than 8 per cent and a substantial number more than 10 per cent (where the "current yield" is obtained by comparing dividends paid during the last twelve months with the current price).[10]

This fact is of some importance in deciding on the degree of competition that exists between the tax-exempt co-operatives and the taxable business firms on the capital market. If the co-operative is limited to 6 or 8 per cent in dividends to stockholders it is currently under a great handicap in obtaining funds if, as is reasonable, we may assume that the degree of risk attached to the co-operatives is not significantly less than that of other firms in the same line of business. Just to mention one example, in an area where co-operatives exist, the common stock of Creameries of America which is listed on the New York Stock Exchange currently yields 10 per cent, paying a dividend of $1.00 with a price of approximately $10.00 per share.

Professor Guthmann grants that some co-operatives find it difficult to raise adequate capital despite their tax-exempt status. He refers to the fact of the farmer marketing co-operatives' ". . . failure to pay dividends on their stock adequate enough to attract investment by members."

Now we turn to the main question whether a tax-exempt enterprise will charge lower prices than the taxable firm—not in the form of a patronage dividend but in the form of a lower price at the time the sale is made. The question is essentially whether the income tax plays a part in price decisions. In some cases, it clearly does not. Professor Guthmann admits that "Most marketing co-operatives pay their members the going market price for their crops at the time they are delivered to them."

10. A review of the dividend and price data published in *Barron's*, December 18, 1950, indicates that 171 stocks listed on the New York Stock Exchange yielded 10% (as defined above).

Is there any reason why the income tax should affect price? If the income tax plays no part in price decisions then presumably exemption from the tax plays no part in price decisions. We have all heard the statement that an income tax cannot be shifted in the short run. Can we accept this statement as valid?

In answering this question we must distinguish between prices set in a competitive market and prices which are administered to some degree. Under competitive conditions, the traditional doctrine of the non-shiftability of the income tax acquires importance. We are all familiar with the assurance that the point of maximum profit before the tax is the same as the point of maximum profit after the tax in the short run. This has relevance, of course, only on the assumption of maximization of profit in the short run.[11] Even on this assumption there are some modifications that have to be made in the general conclusion: (1) the tax is computed on the "income" as defined for tax purposes; from an economic point of view this may include some elements of cost and hence may result in shifting even in the short run; (2) the computation of maximum profit may not make allowance for the varying risks involved in different outputs, such as the risks involved in committing different amounts of working capital; if this imputed cost is taken into account there may be some inducement to shifting of the tax because in that case the imputed cost varies with output and is shiftable in the same sense as any tax which varies with output.

An intermediate case is that where the firm was not maximizing profit before the tax was imposed, but is provoked into maximization by the imposition of the tax. In that case, anything is liable to happen after the tax is imposed. The price before the tax was imposed may have been higher or lower than that which would maximize profit. The imposition of the income tax may provoke a change in price in the direction of maximizing profit after tax but we cannot tell whether this means an increase or a decrease in price nor can we tell whether a tax-exempt firm will in such conditions charge higher or lower prices than a taxable firm. Once we depart from the assumption of consistent profit maximization we allow of a large variety of behavior patterns and there is no reason to believe that the tax-exempt firm will behave in such a way as to undercut the taxable firm.

Now what happens if, following Professor Shoup, we drop the assumption of short-run maximization of profit. For reasons of public

11. The extensive literature on this subject cannot be covered here. For a recent review see P. Wiles, "Empirical Research and the Marginal Analysis," *Economic Journal* (September, 1950), pp. 515–30.

policy or for other good and valid reasons the enterprise may decide not to charge the price which will yield the greatest possible profit in the short run but rather to charge a lower price consistent with a "reasonable," "sufficient," "normal," or "satisfactory" profit over the long period. Wherever the possibility of a price increase exists, but the price increase does not take place because profits are reasonable and satisfactory, the possibility of shifting an income tax is a real one; and the possibility that the exemption from an income tax will influence prices is likewise a real one. Under such conditions exemption from an income tax may encourage a lower price than would otherwise prevail and hence may give the tax-exempt business a price advantage over the taxed business. This would confirm Professor Guthmann's conclusion that the tax-exempt enterprise charge lower prices than the taxable corporation.

But there seems to be a conflicting tendency. In his section entitled "Tax Equality Should Not Handicap Co-ops" Professor Guthmann states, "furthermore, some of these [co-operatives'] leaders have stated that if their patronage dividends were subject to taxes they would *lower* their prices to their customers by the amount of the patronage dividends and so avoid the question of the taxability of such amounts" (italics added).[12]

At a later point, referring to utilities, Professor Guthmann says that the taxation of the tax-exempt companies ". . . might even lead to rate reduction by municipalities anxious to avoid the income tax." He also says "a corporate income tax could be avoided by a municipal utility willing to pass all 'savings' along to consumers through reduced rates." Thus co-operatives, because of their peculiar nature and purpose, may prefer to give their patrons the entire benefit of lower prices rather than pay any part of the higher prices to the government in the form of income taxes. This suggests that the taxable corporation, knowing that its profits will be taxed, may charge lower prices if it feels that it will be making larger profits by charging a higher price. Thus if the taxable corporation is not maximizing profit in the narrow sense but is merely interested in getting a reasonable or satisfactory profit (after taxes) it may be induced to charge lower prices than the tax-exempt enterprise.

12. Compare the following statement made in 1945 by the manager of the National Association of Co-operatives: "If co-operatives could forecast all expenses, with unerring accuracy, and could predetermine their own exact business volume, it would then be possible to quote prices to patrons that would result in their operating exactly at cost. No one has yet suggested that any net income would be realized or that any tax liability would accrue under such conditions. Neither has anyone seriously suggested that such a plan is practical in the business world of today" (Newton, *op. cit.*, p. 272).

Conclusion

In conclusion, we may ask, "What would happen if we imposed an income tax on tax-exempt enterprises?" (1) If they have been trying to maximize their short-run profits and continue to do so, they may not change their prices at all. (2) But if they have merely been seeking a satisfactory or reasonable profit, they may decide to raise prices in the hope of getting the same net return as before. (3) And if, in accordance with some of the possibilities suggested by Professor Guthmann, an income tax would induce co-operatives to reduce their prices (thus increasing their competitive effectiveness) in order to avoid making profits and paying taxes, we would have to conclude that *exemption* from the income tax reacts to the *dis*advantage of the tax-exempt enterprise as far as day-to-day price competition is concerned.

SOME CONSIDERATIONS ON THE INCIDENCE OF THE CORPORATION INCOME TAX

CARL S. SHOUP
Columbia University

THE PRESENT PAPER aims only at exploring a few of the factors bearing on the incidence of the corporation income tax that have been somewhat neglected.

Although the incidence of the corporation income tax is a matter of considerable uncertainty, the most plausible assumption continues to be that for the most part it is upon the holders of common stock. Nevertheless, there remains a considerable possibility that the tax in part is being shifted to consumers through higher prices. The present analysis is in terms of an increment to an existing tax, rather than in terms of the whole tax, and, unless otherwise specified, assumes an initial rate of about 35 or 40 per cent, to which an increment of 10 or 20 points is added. The term "business tax" is used occasionally, when the statement holds for a tax on unincorporated concerns also, but the corporation income tax is the main topic of this paper.

If an increment to a corporation income tax is shifted forward in product prices, there are certain aspects of the process that are peculiar to this tax, or to business income taxes in general. The following analysis is devoted to a statement of those peculiarities, and attempts to analyze their bearing on the degree of shifting. Shifting is taken here in the usual sense of a tax-induced rise in price. Complete shifting of the tax increment merely means that the price has risen by the full amount of the increment in tax. It says nothing of the extent to which production is decreased, or of the loss of consumers' or producers' surplus. However, as it will be seen, the conceptual problem of defining a situation where price rises by the full amount of the tax is especially difficult for the income tax.

The peculiarities discussed here are: (1) the spiral effect, whereby a given increase in the income tax rate, say 20 points, for complete shifting requires a greater rise in price if the increase in tax rate starts from an already high level of tax rate, provided complete shifting is defined in terms of the tax payable at the new, not the old, equilibrium; (2) the way in which the ratio of income tax to sales will differ, even among firms earning the same return on capital; (3) the effect

of a loss carry-over provision on the degree of certainty with which a business concern can estimate the rate of tax it is paying on any one year's business.

The brief analysis in this paper is further restricted to oligopoly (as defined, for example, by Bain), either pure or differentiated. The peculiarities encountered by oligopolists in considering the shifting of a business income tax will be discussed as they appear; first, if the action of the oligopolist is one of raising prices almost immediately, and second, if the reaction instead is one of allowing the firm to shrink in size, the increase in prices thus awaiting a restriction of supply.

The first case may be questioned as unreal. Why should the oligopolist raise the prices of its products just because the income tax has been increased? It was already maximizing its income, given its existing plant and equipment and other assets. However, I am inclined to think that business firms in an oligopoly (pure or differentiated) may on occasion raise its prices when a substantial change in the income tax is imposed, and do so with the aim of maximizing its profits (after tax).

For one thing, in the complex business world of real life, where ignorance and uncertainty are great, where each firm produces several products for which much of the total cost is common cost, the oligopolist may decide that the aim of profit maximization is best served by establishing a routine of immediate response to anything that substantially impairs current profits.

Secondly, an oligopoly's structure of product prices may be floating at a level from which an upward movement, by increases in all prices of all products of all firms, would increase the profits of each firm. The price structure is at that level, rather than higher, because of historical accident and inhibitions on collusion, but it is ready to be moved higher if some appropriate reason, or excuse, can be found that will give the requisite courage to the price leaders of each of the products. A substantial increase in income tax may be that excuse.

These reasons may not be the only ones why a rise in income tax will induce a prompt rise in prices, and they may not be very important; but my own discussions with business men on the role of the income tax in pricing have led me to believe that it is not a waste of intellectual resources to inquire into the peculiarities that would face a business firm which attempted to recoup the income tax by price increases. The issue is not entirely unreal.

This point is emphasized by the alleged prevalence in the past few years of what has been called "stay-out" pricing. Under this policy the price leader or leaders, in a boom period of unusual demand, pre-

fer to keep prices down and allocate their output informally among their customers, instead of raising prices to the point where the prices themselves do the job of allocation. Under stay-out pricing, the industry makes sure that there will be no substantial influx of new firms. A rise in the corporation income tax rate is likely to cause the price leader to conclude that it is safe, and desirable, to raise prices somewhat, without danger of undermining the stay-out policy.

In the second case, where the oligopolist's reaction to the tax is one of allowing the firm to shrink in size (compared with what it would have been at any given time in the absence of the tax), a significant point for tax policy is the speed with which this kind of adjustment may be made. The length of time required to restrict supply is smaller than is commonly noted. First the size of the firm in absolute terms can be reduced quickly by reducing the amount of inventory and contracting the amount of accounts receivable. Second, repairs, renewal, and expansion of plant and machinery will usually be a continuous procedure if the period is one of prosperity. The size of the firm (compared with what it otherwise would have been) can be cut quickly by a cessation or slowing down of the rate of expansion, renewal, or repairs. The "long period" of economic analysis is apt to be short in a period of prosperity and long in a period of depression. The income tax is most important in a period of prosperity (with qualifications, to be discussed in what follows, arising from the carryover provisions).

Spiral Effect

We may lead into a statement of what I call the spiral effect of the business profits tax by first discussing the possible definitions of complete shifting under such a tax.

Traditionally, forward shifting is considered complete when the price rises by just the amount of the tax on the article. In this definition, the effect on volume of sales and on profit is disregarded.

This concept, by which the rise in price is compared with the tax per unit, fits well with a specific tax, where the tax per unit is defined, and is the same no matter what the price. It does not fit as well with an ad valorem tax on output, where the tax per unit is not the same at the new, higher price as it was at the initial price. The concept fits still less well with a tax on profits. Should complete shifting of a tax on profits be defined as a rise in price equal to this fraction: the amount of tax that would be payable at the initial equilibrium, divided by the number of units sold at that equilibrium? Or instead, should complete shifting be deemed to occur only when the price rises by an amount equal to the tax actually payable at the new equilibrium di-

vided by the number of units sold at that equilibrium? The latter definition seems preferable. Both the businessman and the economist are most interested in the amount of tax actually payable, not the tax that would have been payable if the profit at the pre-tax equilibrium had remained unaltered.

At this point, a subsidiary question may be considered. In terms of the new equilibrium does the definition call for a greater rise in price under complete shifting? At the new equilibrium, the number of units sold will be smaller. If the move to this new equilibrium is made by the oligopolists' raising prices, as an appropriate occasion to reach higher profit levels, as suggested, the profits-before-tax will be larger than before, and hence the amount of tax payable will be larger. The combination of a large absolute amount of tax and a smaller number of units means, of course, a larger rise in price under the preferred definition of complete shifting than under the first definition given above. But if the move to the new equilibrium is made by reducing the amount of capital in the firm, with the aim of maintaining the rate of profit (after tax) per unit of capital, then the absolute amount of profit (before subtracting tax) may possibly decrease as fast as, or faster than, the number of units sold. If it does not, complete shifting will still require a greater rise in price under the preferred definition than under the definition in terms of profit and units sold at the initial equilibrium.

Turning back now to the case where the oligopolists use a given increase in income tax (say, an increase of 20 points) as an excuse to reach a higher level of profit-before-tax, their success, measured in terms of what they can keep after tax, will be greater the lower the initial rate of tax. If initially the tax rate is only 30 per cent of the profit, and if a 20-point increase is imposed, the net result for the oligopolist from raising his prices will be greater than if the 20-point increase were put on top of a 60 per cent rate. Suppose that the initial profit before the tax is \$100, the tax is \$30, and the profit after tax is \$70. The tax is now raised to 50 per cent. Profit after the tax is \$50. The oligopolist uses the tax as an excuse to move to a level of profit-before-tax of, say, \$120, by raising prices and restricting output. He now has a profit after tax of \$60. Compare this result with that obtained if the initial tax is, not \$30, but \$60. The tax is now raised to 80 per cent. Profit after tax is \$20. The firm moves to a level where the profit before tax is \$120, as before. Profit after tax in the new position is now \$24. Under the low initial rate, profit after tax rises from \$50 to \$60 as a result of the price increases. Under the high initial rate, it rises from \$20 to \$24. The percentage rise in profit is the same, but

the absolute rise is much smaller. The absolute amount is important, even if we take into consideration the decrease in the amount of capital that, ultimately, the oligopolist will have invested in the business in view of the lower rate of output; for it is unlikely that this factor will counterbalance the effect exerted by a substantial difference in the initial rate of tax.

In a world of certainty, the oligopolist would take the excuse to raise prices to the level that gives him $120 profit before tax, in either case, if indeed he had not done so already. But in the real world of uncertainty, where the existence of this untapped higher level of profit-before-tax is somewhat conjectural, the oligopolist may not move under the 20-point increase when it comes on top of an already high tax rate, when he would if it were added to a lower rate.

The spiral effect is still more evident if we assume that the business firm is considering what it would have to do if it is to maintain the amount of profit-after-tax unchanged. A 20-point increase on top of an already high tax rate would require a much greater increase in profit-before-tax, to meet this aim, than if the same tax increase were on top of a low tax rate.[1]

With the income tax as an excuse, suppose that the oligopolists decide they have no higher level of profits to move to; but instead, they meet the tax increase by withdrawing enough capital so that the remaining units of capital yield the same rate of profit, after tax, as was obtained before. The spiral effect is still relevant. The amount of profit-before-tax per unit of capital must be higher than it was before the tax increase. As this profit-before-tax per unit of capital employed is pushed up, by withdrawing units of capital, the profit increment is cut away not only by the 20-point increase, but also by the basic rate. Suppose that a unit of capital of $100 is earning $11 before tax, under a 10 per cent tax, and hence $10 after tax, for the desired return of 10 per cent. If the 10 per cent tax is increased to 20 per cent, each unit of capital remaining in the business must earn $12.50 before tax, if the desired net return of 10 per cent is to be obtained. If, on the con-

[1] If p_o is the initial profit after tax; p_n is the profit before tax at the new equilibrium; t_o is the initial tax rate; and t_n is the new tax rate: then, if the profit after tax is to remain unchanged, the profit before tax must increase by the amount of the increase in tax. That is, $p_n - p_o = t_n p_n - t_o p_o$; therefore,

$$p_n = \frac{p_o(1 - t_o)}{1 - t_n};$$

and

$$p_n - p_o = \frac{p_o(t_n - t_o)}{1 - t_n}.$$

Carl Shoup, "Incidence of the Corporation Income Tax: Capital Structure and Turnover Rates, *National Tax Journal* (March, 1948).

trary, the initial tax rate is 80 per cent, instead of 10 per cent, each unit of capital would have to earn $50 before tax, in the initial situation. With the 10-point increase added, each unit of capital remaining would have to earn $100 before tax if the net rate of 10 per cent were to be earned in the face of this 90 per cent tax. In the first case (low initial rate) under a 10-point increase in the tax rate, the profit-before-tax, per unit of capital, must rise from $11 to $12.50. In the second case (high initial rate), it must rise from $50 to $100. The percentage rise in selling prices of products will almost surely be greater in the second case than in the first.

As the corporation income tax rate gets up into the range of say, 40 per cent and above, long-term considerations of whether it is worth while to keep capital at work, if there is no immediate shifting, become of course more significant than when the tax rate is low. A 20-point increase on top of a 60 per cent rate, if neither segment of the tax is yet shifted, will surely cause more consideration to be given to the possibility of moving capital out of the taxed field than will a 20-point increase on top of a 30 per cent rate. The forces making for a shifting of a 20-point tax increase through the removal of capital are much stronger if the 20 points are added to an already high rate.

Even so, the force may be weak, judged by the degree to which it affects capital. The capital in question is equity capital, excluding preferred stock. What are the alternatives for the owners of equity capital? They are: (1) transformation into creditor capital (including preferred stock); (2) use of the capital in unincorporated enterprises, not a very important option quantitatively; (3) use of the capital abroad, which was an important consideration in the England of Ricardo's day, but is not so to United States investors today; (4) use of capital in tax-exempt state and local bonds, which for the most part would probably result only in a redistribution of those securities; (5) holding the capital in liquid form (cash, deposits); (6) consumption of capital, including under this last item the failure of savings to grow as it otherwise would.

I am inclined to agree with what seems to be the general opinion, that profit is rather compressible over the long period, without inducing a great decrease in the supply of equity capital. But surely at some stage, these forces begin to operate—if not with a 40 per cent tax, or even with a 60 per cent tax, then with an 80 or 99 per cent tax—the theoretical problem is still there (incidentally, as recently as twenty years ago a peace-time corporate rate of 38 per cent would have been regarded as so unlikely as to be scarcely worth discussion).

If the reaction of the equity-capital supplier is primarily number

(1) above, that is, to shift his capital into use in creditor form, the consequences will be a fall in the supply of corporate equity capital (supply in terms of the rate of profit before income tax) and a rise in the supply of corporate creditor capital. Would this lead to a considerable decrease in corporate output? It would, if the demand of corporations for creditor capital is very inelastic. The equity holder who would like to invest in creditor form would then be driven toward alternatives (2) to (6), for part of his capital or potential savings. There is evidence that for many corporations the demand for creditor capital is strangely inelastic, and we may therefore suppose that if the tax is high enough to drive capital away from being equity capital in corporations, it will probably also lead to some restriction in production by corporations. However, we know almost nothing about the quantitative relations in this field.

Disparities in Price-Tax Ratio

If an increase in the corporation income tax does induce a rise in the prices of products in an oligopolist industry, the following reasons make complete shifting by all firms quite unlikely. With respect to any one product, the percentage of sales proceeds that is brought down to profit will commonly vary from firm to firm. Hence the percentage by which the price of the product must be increased if the tax is to be completely shifted by all firms will tend to vary from firm to firm. Competitive considerations are unlikely to allow such diverse increases in price, at least in pure oligopoly.

In the case of two different products, produced in different industries, it is still more likely that the percentage increase in price necessary to shift the tax will be substantially different.

There are two reasons for these variations. First, the speed with which the entire property used by the concern is turned over, into sales, commonly varies from firm to firm within an industry, and must vary from one industry to another, depending on the degree to which the concern or industry makes use of long-lived assets. Second, the extent to which property is carried by borrowed money or is obtained on lease, as distinguished from property that is purchased by money obtained from the sale of preferred or common stock or from retained earnings, will likewise affect the percentage rise of prices needed to recoup a given increase in income tax. I have analyzed these factors at some length elsewhere, and will not repeat them here.[2]

2. Shoup, *loc. cit.* It has been suggested that the rate of tax, capital structure, and rate of turnover of property used in the business indicate "the *extent* to which the tax increases costs" (J. Fred Weston, "Incidence and Effects of the Corporate Income Tax," *National Tax Journal* [December, 1949, p. 313]). This seems not to be so with respect

The result is that an increase in the selling price of a product that would recoup the income tax for one firm would fall short of that goal, or would overshoot it, for the other firms. Similarly, as between producers of different products, the former ratios of prices to each other would have to be changed if complete shifting were to be achieved.

These difficulties in the way of obtaining a uniform degree of shifting of the income tax are enhanced by the fact that each firm produces, and hence must set prices for, many products. Therefore, an income tax poses a much more difficult price-policy problem than a sales tax. Similar problems in price policy are caused by an increase in wage or interest rates, since here, too, the percentage rise in price needed to recoup the cost will differ from one firm to another.

The profit margin will customarily differ among the products of the same firm. Hence complete shifting of a given income tax will tend to require a different percentage rise in price from product to product (of course, differing demand elasticities, here, as in the cases above, will also affect the result).

Moreover, the reason why different products of a single firm vary in the ratio of profit to sales, at least as shown by the accounting records, may be due largely to a factor other than those mentioned above. A common pattern is that in a given "industry," Firm A will be producing Products 1, 2, 3, and 4 (actually, many more), while Firm B is producing Products 3, 4, 5, and 6, etc., Firm A may be a price leader on Products 1, 2, and 3, while Firm B sets the pace on Products 4, 5, and 6. The profit margin of Firm A on Product 4, with respect to which it is not a price leader, is likely to be much lower than on Products 1, 2, and 3 simply because price leadership rests in Firm B through superior technical ability in the production of this item. Firm A would like to know how to produce that item so as to realize a profit margin comparable to that on the first three items, which, we may suppose, require no different proportions of slow- and fast-moving capital; but it does not know, and is forced to follow Firm B's lead in pricing. Under these circumstances, the suggestion made above, that the price tends to rise by a smaller amount on articles that carry a small percentage of sales to profit may not be valid. The price leader, making a good margin of profit on this item (Product 4),

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to the rate of turnover. Two firms with the same amount of capital and capital structure, needing the same rate of return on capital, will then be saddled with the same amount of cost under a given rate of income tax; but the rise in price necessary to recoup the tax will differ according to the speed of turnover. As the analysis above indicates, I am still inclined to believe that "the magnitudes of the variables . . . will determine whether the tax is shifted or not," (*idem*) or, more precisely, will help determine the extent to which the tax is shifted. See also Morris Beck, "Ability to Shift the Corporate Income Tax: Seven Industrial Groups," *National Tax Journal* (September, 1950).

may raise the price considerably, and in that event Firm A will follow. The statement thus needs modification to read that there is a tendency for the price to be put up by a larger percentage on those products that carry a large margin of profit to sales in the firms that are price leaders on the products.

The pricing policies of multiple-product oligopolies, that is, practically all oligopolies, needs much more research before the implications for income taxation become very clear.

Carry-Over of Operating Losses

Under the present federal income tax law, a business firm may offset the operating loss of any one year against the profits of other years. First, the loss must be subtracted from the profit of the immediately preceding year, thus giving rise to a tax refund. The remainder of the loss, if any, may be carried forward to be offset against the profits of the succeeding years (to a maximum of five years).

Suppose that the firm attempts to take the income tax into consideration in setting the prices for its products. Should the carry-forward and the carry-back logically affect the pricing decision? The two measures differ in this regard; one injects uncertainty into the pricing policy of depression periods; the other, into the pricing policy of prosperous years.

First, consider only a carry-forward of losses. In a year of prosperity, the management would know at once the full extent to which that year's business was incurring an income tax liability, since the carry-forward of past losses would be known and could be allowed for. The results of any given pricing policy for a prosperous year could be correspondingly definite. In a year of loss, on the contrary, the concern would have to take into account the possibility that this loss would be reduced by the effect of the carry-forward on the income tax in a later year of prosperity; and the result of any given price policy for that depression year would be correspondingly indefinite. No doubt it would appear safe to assume that future years would bring with them some recouping of the loss (through smaller income tax payments than would have been due in the absence of the carry-forward). Thus a reduction of selling prices in a depressed year could safely be considered as leading to a somewhat smaller ultimate loss than would be indicated by the result for that year alone. Nevertheless, the pricing policy, in so far as it was influenced by the income tax, would be more firmly based during prosperity than during depression.

Suppose, instead, that only a carry-back of losses is in effect. Now, the greater uncertainty of the ultimate results of any given pricing

policy attaches to the year of prosperity. Under a carry-back, it is not known how much of the profits of the prosperous year will be offset, ultimately, by losses of a later year, with a corresponding income tax refund paid in the prosperous year. On the other hand, the results of any given pricing policy (so far as income tax liability is concerned) in a year of loss would be definite.

Do these considerations have any bearing on the possibility of shifting the income tax? Perhaps not, but it might be argued that uncertainty over the results of a pricing policy is more important, in terms of the amount of business affected, if it occurs in a year of prosperity, which is usually also a year of a large volume of business. Then a carry-back, considered in its effect on price policies over a period of years, tends more to prevent shifting of the tax, or tends to prevent more shifting of the tax, than a carry-forward. But these remarks are only first-approximation armchair speculation, and need to be given content by discussion with business executives.

Incidentally, a carry-back of loss in principle should be a powerful check to any tendency the business firm might have to spend money carelessly because of a high marginal rate of the income tax. In effect, the firm does not know just what the marginal rate of tax on this year's business will turn out to be. If the concern suffers a heavy loss in a later year and can carry the loss back, it may find that its final marginal rate for the year of prosperity in reality was zero. The marginal expenditures in the year of prosperity, after all, were not being paid for largely by the government. This consideration applies especially to an excess profits tax. The tendency to be careless about expenditures under a high marginal rate of an excess profits tax can thus be checked by the allowance of a carry-back of unused excess profits credit.

SOME CONSIDERATIONS ON THE INCIDENCE OF THE CORPORATION INCOME TAX
(Discussion)

RICHARD GOODE
The University of Chicago

PROFESSOR SHOUP'S PAPER seems to me to be a very useful and realistic treatment of the incidence of the corporation income tax. His emphasis on oligopoly and price leadership and on ignorance, uncertainty, multiple products, and common costs offers the best explanation of the possibility of short-run shifting. By dropping some of the simplifying assumptions that economists have usually made, Professor Shoup shows that businessmen have some basis for their repeated assertions that short-run shifting does occur. In discussing long-run shifting, he makes the important point that this process may be much quicker than is commonly assumed, especially in times of prosperity. Our understanding of the shifting process is also improved by Professor Shoup's comments on the significance of the height of the tax rate before it is increased, the price-tax ratio, and carry-backs and carry-forwards of net operating losses.

The following remarks relate to only a few of the many interesting aspects of the paper.

1. Professor Shoup notes that "complete shifting" of a profits tax is a somewhat ambiguous concept. He prefers to define it as a price rise equal to the amount of tax payable on the new equilibrium output divided by the number of units sold at the new price. This definition is parallel to that usually applied to specific sales or production taxes. Might it not be more revealing, however, to say that a profits tax is completely shifted if producers remaining in the industry realize the same after-tax rate of profit on capital or sales as before the tax was raised? This definition, I think, would tell more about the stability of the new equilibrium and perhaps also more about the real "burden" of the tax.

2. One interesting situation discussed by Professor Shoup is that in which producers hold down prices for the purpose of keeping out new firms. If the corporation income tax is increased, the price leader may consider it safe to raise prices. It is a matter of common observation that, acting on this or other motives, many manufacturers have

in recent years deliberately set prices below the short-run equilibrium level and formally or informally rationed output. But is this such an effective way of keeping out new firms that the policy may be expected to be long continued for this purpose? It seems that unsatisfied demand will offer as strong an attraction to new producers as would an increase in prices by old producers. In either situation, costs of entry and uncertainty of the future market are the greatest deterrents to new firms. Furthermore, if demand is not satisfied at list prices, a gray market may develop. The automobile business in the immediate postwar years illustrates this situation. Under these conditions, some of the profits foregone by manufacturers find their way into the pockets of retailers, second-hand dealers, and individuals who buy for resale. In such a market manufacturers can react to a tax increase by raising list prices without correspondingly increasing actual prices to final consumers.

3. Professor Shoup points out that, because additional profits resulting from a price increase are subject to the corporation income tax, complete shifting is often difficult. He suggests that when tax rates are already high an oligopolist may be less disposed to raise prices in an attempt to recover a tax increase than he would be if the initial tax rate were low. On the other hand, Professor Shoup concludes that a tax increase coming on top of an already high rate is more likely to drive out capital and bring about higher prices through contraction of the industry. Although a high tax rate may make *complete* shifting more difficult, I am inclined to believe that it will make *some* shifting more probable. Disinvestment or at least a reduction in the rate of new investment is more likely to occur, and from the public relations standpoint the price increase can more easily be justified when tax rates are high and profits after taxes low.

4. Professor Shoup's analysis shows that the corporation income tax may result in higher prices for particular commodities. Will these price increases be offset by lower prices for other commodities, or will other prices remain stable while these prices rise? In other words, will the tax raise the general price level or only change relative prices? A tax-induced change in relative prices may cause a loss of consumer satisfaction and of efficiency, but it will result in a different distribution of the tax load than a general increase of commodity prices. The effect of corporate taxes on the general price level is of immediate practical importance in forming appropriate anti-inflationary fiscal policy.

Appraisal of the effect of any tax on the general price level requires consideration of its impact on aggregate income or its monetary ef-

fects. A discussion of these topics is not possible here, but I do want to say that it seems to me that nothing in Professor Shoup's analysis or in most other treatments of the problem indicates a rise in the general price level. What is suggested is a change in relative prices. Because the corporate tax applies only to incorporated businesses, it will tend to bring about an increase in relative prices of commodities in whose production the corporate form is especially advantageous. In general, these are products of heavy manufacturing and other large-scale, capital-intensive industries. The tax may also raise prices of commodities produced by self-restrained monopolists or oligopolists. Occasionally, an increase in the corporate tax may jolt the indifferent or timid producer to assert a monopoly power that he already had.

The possibilities of changes in relative prices are important qualifications of the traditional conclusion that the corporation income tax canot be shifted. I agree with Professor Shoup, however, that "the most plausible assumption continues to be that for the most part . . . [the tax] is upon the holders of common stock."

PROPERTY TAXATION IN RELATION TO INVESTMENT IN URBAN AREAS

GEORGE W. MITCHELL
Federal Reserve Bank of Chicago

THE INCOME TAX STATUS of the investor has become so dominant a factor in appraising investment opportunities that other tax considerations have come to seem insignificant. The marginal rate of tax for even a small investor approximates 20 per cent, for the wealthy, over 50 per cent. Since the gains from tax avoidance are such as to whet the interest of most investors, the "opportunities" for income tax avoidance are more significant determinants of investment than property taxes. Consider, for example, home ownership as an investment.

Exemption of the return on the investment in owner-occupied residential property virtually eliminates competition from any other type of investment with comparable security. Moreover, if treating such investment by home owners as tax-exempt is not a sufficient incentive, the home owner can also consider the privilege of deducting from other income the property taxes that he pays on a tax-free investment as well as any interest charges. For those who are satisfied to own their living quarters, the attractiveness of this type of investment is assured by its treatment under the federal income tax.

The income tax aspects of home ownership are not alone among the factors having special pertinence to investment in real estate. The fact that investment in real estate does not require a corporate entity and lends itself to the use of the capital-gain loophole raises all sorts of interesting possibilities to individual investors. Both corporate and individual investors find other opportunities for savings in property utilized as an adjunct to a commercial or industrial enterprise. Tax counsel will provide an infinite variety of suggestions for using real estate investment to minimize personal and corporate income taxes and to maximize the after-tax return. Many of these suggestions are not feasible for use in other avenues of investment.

The foregoing considerations imply that the influence of property taxation on investment is definitely secondary to the impact of the income tax. It might be put in these terms: if the composite investor, a weighted fellow, not a simple mean, were confronted with the choice of a less favorable income tax treatment or higher property taxes, he would unhesitatingly choose the latter.

In diminuendo, therefore, I will consider two significant aspects of property taxation: (1) property taxes are definitely shrinking in relative and absolute importance; (2) in urban areas the significance of property taxation depends conspicuously on differences in location and differences in type of property.

The investor in improvements on real estate does not ordinarily anticipate the amortization of his investment in less than twenty years; a life of fifty is more common, and one of seventy-five to a hundred not rare. A forecast of the long-run trend in costs and earnings of the property is thus of major importance. On the cost side the property tax is a major consideration. Since the tax is an *in rem* levy and the government imposing it looks to the property as security for the tax, this is a cost that the owner cannot always require a lessee to absorb. Unanticipated changes in the level of property taxation as they affect the owner's equity are a hazard or windfall that can seldom be avoided. These changes may appear gradually in effective tax rates without commensurate changes in earnings. They may be so gradual that the owner fails to recognize the deterioration or enhancement of his investment. On the other hand, cyclical changes are comparatively sudden and have brought on dramatic reactions among property owners, including intense opposition to the inelasticity of property taxation in depression. Therefore, it does not quite suffice to predict the long-run trend in the property tax.

The state governments have all but given up property taxation. Where some dependence remains, it is likely to appear as an in lieu tax or in some classification of personalty. Local government still depends on real estate taxation; it is the only significant source of self-support for most local units.

Despite the universality and the age of the property tax, it ranks fourth among the major tax bases used by government today, and accounts for only an eighth of tax revenues. It now yields $6.8 billion as compared to $16.1 billion for the personal income tax and $11.8 billion for corporate income tax and $12.6 billion for the sales and consumption excises. It has been losing ground steadily. A decade ago it brought in $4.4 billion, nearly four times personal income tax collections, three times corporate income taxes, and a third again as much as the excises and sales taxes. Since 1910, with the exception of the World War I years, the tax had typically accounted for a little over 50 per cent of the tax revenues of all levels of government.

More significant than these comparisons with other taxes are the changes in effective tax rates, i.e., the relation of property taxes to property values. Such data as are available indicate that the effective

rate of property taxation has been declining over a period of about two decades. In a sense this is an unfair comparison as it begins in a depression and extends into a highly prosperous period. Nevertheless, a comparison between 1940 and today evidences a similar trend and is not subject to this shortcoming.

The facts with respect to effective property tax rates are notoriously incomplete—as charitable a characterization as can be made even granting real difficulties in measurement of values from time to time and place to place. One must set aside as biased or haphazard the personal knowledges and case histories on the one hand and the tabulation of nominal taxes, including even those adjusted for officially recognized assessment ratios, on the other. The best information can be obtained from the bona fide sales of real estate. Unfortunately there are only a very few jurisdictions in which information of this type has been assembled over a period of years.

Such data are available for Illinois. They indicate that since 1940, real estate values have increased 150 per cent. This increase is net in the sense that it takes into account increases due to new construction and decreases due to depreciation and obsolescence as well as price-level changes. By way of comparison, population for the state increased 10 per cent and the sales tax base 150 per cent in these years.

Real estate taxes on the other hand increased 75 per cent and the effective tax rate declined from 2.17 per cent to 1.53 per cent. As one would expect, most of the decline in the effective rate took place during the war years—the low of 1.49 per cent was reached in 1946. Thus a decline in effective rates of about 30 per cent has been sustained in the postwar period. It is quite probable that further upward adjustments in property taxes will entail only a minor increase in effective tax rates from the level of 1.53 per cent, given a moderately high level of economic activity.

Fragmentary statistical evidence such as cited here is probably not as convincing an argument that property taxes are decreasing as an analysis of recent developments in state and local finance.

Since the property tax is not used by the federal government and the states have virtually abandoned it, its role in the future depends upon how it will be utilized by local governments. If local governments lose functions to the states and the federal government, the property tax will be called upon to finance steadily decreasing proportion of the total cost of government. However, it is not necessary that local activities be curtailed for the property tax to decline in absolute importance. A system of grants-in-aid—the collecting of revenues by the states and the federal government and the expending of them at

the local level—is another phenomenon that can achieve the same effect as the transference of functions. The federal government and the states increasingly are turning to sales, income, and business taxes to subsidize the operation of local governments. Property-tax payers thus become beneficiaries and the tax load is apportioned to an increasing extent by consumption and net income.

However, some of the larger local governments are finding that they can utilize other sources of revenue than the property tax. Fees for the rendering of specific services are growing in importance and some localities are using the same forms of taxation that have displaced the property tax in state governments.

In the present-day environment the property tax does not appear to be a revenue that governments will deliberately look to as a source of additional funds. In many communities there have been, of course, complaints of increases in the dollar amount of property taxes. In inflationary times these increases are inevitable unless the effective rate of taxation is to vary inversely with price-level change. As noted above, the available evidence indicates a pronounced decline in effective rates despite increases in property tax bills.

Looking to the future and projecting the trend of recent decades one would expect property taxation to continue its decline in fiscal importance, not only in a relative sense, but absolutely as well, when measured in terms of effective tax rates. And this decline would seem to be inevitable if only because local governments have lately acquired alternatives to the property tax in the form of grants from the states and in the form of charges and the use of local sales and income taxes.

Another entirely different reason for anticipating a decline in property taxation lies in the character of local expenditures and the age-old problem of the rich and poor living together in harmony. The major costs (about 80 per cent) of state and local government are for health and welfare, education, and highways. The functions of welfare, health, and education (about 65 per cent of total costs) by their nature consist in part in the redistribution of income. Via taxes, governments collect from the members of the community with taxpaying capacity funds which are used to provide services for all—those who pay taxes and those who do not. The leveling effect of public expenditures is most evident in the case of public assistance and poor relief but it is also a factor in providing common-school education, as I am sure you would agree if you ever tried to persuade a school district to extend its boundaries to take in the children across the tracks.

The standards of public assistance and education are under con-

stant pressure to recognize the levels set in wealthier communities. Such equalization can only be achieved by using taxes with the broadest possible geographical base. A local property tax is completely unsuited to adjust to this type of pressure. The units of local government have narrowly circumscribed boundaries and in many states these boundaries can be changed or new units created. In this way, if a natural haven from onerous demands does not exist, it can be created and numerous ways of insuring against encroachment are available. If a poor community attempts to provide through the property tax a level of service that a rich one can well afford it will only succeed in driving beyond its jurisdiction the elements of fiscal strength it does have, for in the areas of welfare, health, and education there is at best a limited identification of tax payments and services received. Strong pressures for greater uniformity in welfare and education standards mean higher standards in poorer communities and these pressures will entail a steadily decreasing reliance upon the property tax by local government. There will be a shift away from self-support to aids from the state and the federal government.

In the field of highway finance trends are also away from the property tax and toward a larger reliance on user taxes. As far as urban streets are concerned the vehicle license and the sharing of motor fuel taxes either have dispossessed or seem certain to dispossess the property tax as a source of local street funds. The special assessment was a serious hazard to real estate investors in the 1920's and has been widely discredited in communities throughout the United States. Intrinsically this device, given proper administration, has nothing that an investor in real estate need fear. It was the abuse of the special assessment by real estate investors themselves that brought it into disrepute.

Some may be disposed to question the conclusion that in the future property taxes are not likely to encroach significantly upon investors' equities and to be even more skeptical of the opinion that investors will derive some windfall from declining effective property tax rates. These opinions doubtless rest to a greater degree than is apparent upon the continuation of inflationary pressures or at any rate upon reasonably high levels of economic activity. The principal reason for skepticism appears to lie in the appraisal of possibilities of deflation and the collapse of capital values. Given such an eventuality, the property tax is in nothing like the exposed position it occupied in the 1930's. In addition to the changes already noted, its timing—the gap between the date of assessment and tax payment—a major cause of

trouble in the thirties, has been reduced in many states and channels of assistance from the states and the federal government have been established and can be used on short notice.

The second topic of significance in real estate investment that I wish to treat has to do with variations in effective rates on different types of property and property in different locations. My remarks here are directed to urban property as distinguished from farm property. In Illinois, for example, over 70 per cent of the real estate value consists of property in urban locations. It is in these locations that the greatest disparities in effective rates occur, principally because of the greater variety in types of property.

Geographical disparities in effective tax rates are a function of the differences in the allocation of functions between the state and local governments, the comparative concentrations of taxable wealth, and the costliness of local services. While some investors are free to choose between widely separated areas for investment, many are restricted to a rather limited section. The home owner must find a place in reasonable proximity to his employment. The business which directly serves a concentration of population must locate its properties where this concentration exists. Some investment, however, is foot-loose and can consider as alternatives areas anywhere in the country.

In the metropolitan region of Chicago there are more than 1,000 combinations of local governments (more combinations than governments, obviously) each of which could, theoretically, have different effective tax rates depending upon the influences each of the factors mentioned above has upon the governments in the combination. Actually, the level of taxation is substantially similar in many of these areas. While it is generally assumed that the highest levels of property taxation are found in the core of the metropolitan area, the central city, such is not the case in the Chicago region. Somewhat higher effective rates are found in many residential suburbs. These higher rates are due primarily to the differences in numbers of children of school age and to the higher ratio of children in public schools in these suburbs than in Chicago itself and to the fact that the typical residential suburb seldom has a significant commercial or industrial component in its tax base. Only a few very wealthy residential suburbs have appreciably lower rates than the core city.

Tax rates in the industrial suburb are typically lower than those in the central city. In the best industrial districts where protective local units of government have been organized and large concentra-

tions of industrial property occur, tax rates are about 60 per cent of those obtained in the core city. For industrial locations outside incorporated areas the differential is even greater.

The fact that local governments, in some states at any rate, can have their circumscriptions designed to maximize taxable capacity and minimize governmental responsibilities makes for a greater range in effective tax rates than is generally appreciated.

The investor in real estate even though he be only a home owner, will usually have the opportunity of considering several alternative locations where differences in property tax burdens may be a substantial consideration. If the investor seeks a home, he obviously will be concerned with the type of community and the character of the governmental services. If he is thinking of a factory which is likely to provide much of its own police and fire protection and even its water supply, he will be less concerned with the character of the services the governments provide. Many of the essential advantages of our present-day industrial life have been extended to the periphery of the core city by the highways, the power lines, and the communication facilities. Thus the core city no longer has a monopoly on some of the indispensable attributes that required industrial concerns to locate within its boundaries. If and as industry tends to be further dispersed, the property tax, because of the nature of local government, will become less significant.

Differences in property taxes associated with different types of property are also significant to the investor. The preferred status of home owners under federal income tax laws has been noted. This is the investor group that has also been beneficiary of the most favorable assessment practices. In most of the larger communities of the country the assessment machinery is directed by an elected official. His elective status makes it impractical for him to be unresponsive to demands of home owners. Since the administration of the tax calls for the exercise of considerable judgment, it is not surprising that effective tax rates on owner-occupied residential property typically are well below the average for all property.

About the only other class of property which seems to enjoy more advantageous assessment treatment is the industrial plant in a one-industry town or the industrial plant that by virtue of the nature of its operations can move from location to location if tax treatment is not favorable. In some states a formal policy of property tax favoritism is officially practiced for new enterprises. In these cases as well as in many other jurisdictions where the practice is not as well adver-

tised, property taxes are obviously a matter of complete indifference to investors.

At the other end of the range of assessment practice are the enterprises that must be part and parcel of the city in order to exist—the public utilities, the commercial enterprises, the department and food stores, and service shops. Even for many of these enterprises property taxes are not a material consideration in investment decisions. A public-utility enterprise may find its output somewhat restricted by having to include higher local taxes in its operating costs and hence charges. The policy of utilities seems to differ in appraising this factor. Some seem relatively complacent toward property-tax burdens, accepting the role of tax collector along with that of seller of utility services. Others are quite resistive to property taxes, probably because regulatory authorities often act tardily in restoring an impairment in earning capacity.

Where the investment in realty is simply a part of a larger investment in the equipment, inventory, and good will of a going concern, the level of the property tax does not seem to be a deterrent. Property investment here is likely to be a by-product of an earlier decision to expand an entire operation or activity.

Among the various classes of property available for investment the residential rental housing and rental office and loft space seem most sensitive to property tax burdens. Assessment authorities seldom accord any advantageous treatment to these properties. Indeed, they are likely to have as high an assessment ratio as any type of property within a given jurisdiction. This fact more than the general level of property taxation seems to have caused some investors to avoid these types of investment.

Rental housing alone comprises a very large segment of opportunity for urban investment. It may well be that the failure of private-rental housing to move ahead more rapidly is partially due to the level of property taxation but it seems at least as likely that controls and the possibilities of contriving somewhat more favorable tax treatment through a public-housing agency or a quasi-public-housing arrangement have limited the readiness with which capital has been invested in such facilities.

In summary, among the factors affecting investment in urban areas, the level of property taxation seems at best of second-rate importance. A host of factors surrounding the federal individual and corporate income tax seem much more important.

Looking at local government and the property tax as institutions

and reviewing such statistical evidence as is available suggests that in the future property taxes will most certainly decline relative to income, sales, and business taxes and are likely to decline relative to the value of property. It is quite possible that property tax bills may increase but hardly as rapidly as the value of property.

The opportunities for investment in urban real estate depend to a significant degree upon the precise location of the real estate—whether it is located in a community having a wealthy tax base and limited demands upon it for government services, or whether it lies in a community that has heavy governmental obligations and a modest aggregation of property tax to support them. It also depends upon the type of property, since typical assessment practices make for material differences in effective tax rates as between owner-occupied residential property and tenant-occupied residential property.

Finally, the future of the property tax is inextricably bound up with the future role of local government. These governments have been shrinking in relative importance. Their major responsibilities in terms of cost are being financed to an increasing extent by state and federal grants. Some of the larger governmental units have found that they too can use sales and income taxes as well as charge for selected types of local service. All these developments tend to reduce future reliance on the property tax. As of today and in the foreseeable future, it does not appear to be a significant deterrent to urban investment.

PROPERTY TAXATION IN RELATION TO INVESTMENT IN URBAN AREAS
(Discussion)

ROBERT S. FORD
University of Michigan

A FEW POINTS of a footnote character are about all that I can add to Dr. Mitchell's paper.

The imposition of any tax will affect, to some extent, the pattern of consumption, saving, and investment and thus exercise some influence on the allocation of resources. Certain taxes, of course, will have less effect than others and this appears to be the case with the property tax, except for investment in urban rental housing.

While there are significant variations in effective rates on different types of property and property in different locations, the factor of deductibility of property tax in computing income tax tends to minimize somewhat the effect of differentials between effective tax rates in different localities. Thus, this factor would simply contribute to the neutral effect of property tax on investment. For manufacturing industry, the tax appears to have exercised little, if any, influence on the incentive to expand plant and equipment.

Dr. Mitchell points out that investment in residential rental housing and rental office loft space is probably the most sensitive to property tax burdens. It would seem that the chronic shortage of housing at reasonable prices is, to a significant extent, due to high effective taxes on real estate. The cost of housing now includes a good part of the cost of local government financed through the property tax. Recognizing that an indeterminate part of the tax on land has been capitalized, there is nevertheless some degree of differential tax burden on housing that probably has deterred investment in this field. A few governmental units have attempted to deal with this problem through temporary tax exemptions or exemptions for a limited period for industrial and housing purposes, but apparently these exemptions have not stimulated investment. The discouragement to private investment would seem to be a factor contributing somewhat to the development of public housing projects.

People are more aware of a capital value tax in depression than in prosperous years. As Dr. Mitchell observes, the property tax "is in nothing like the exposed position" of the 1930's; but a decline in the

level of prices with assessed valuations and effective property taxes typically lagging behind would enhance the deterrent effects of property tax on investment. To the extent that the level of construction activity influences the level of national income and employment, the adverse effect of an increasing property tax burden in depression times would be great.

The changes due to deflation are sudden and abrupt. However, there are other significant changes in the amount of the tax which take place more gradually over a period of time due to greater or lesser reliance on the tax. Mitchell states that "such changes may be so slow that the owner fails to recognize the deterioration or enhancement of his investment." In the latter case it may be a windfall, and in the other an unanticipated increase in costs. Nevertheless this fluctuation in the tax burden is a factor which an investor will have to take into consideration. He knows there will be a property tax, but its amount will be largely independent of the amount of use and the profitability of the investment. Thus, because the amount of tax is subject to change, there is an element of risk and it could act as an element retarding investment.

The factors which may contribute to a future decline in the property tax were outlined effectively by Dr. Mitchell. To the extent that these materialize the effects of the tax will become even less apparent in relation to investment in urban areas.

INDUCTIVE TESTS OF INVESTMENT THEORIES

POSSIBILITY OF AN EXPERIMENTAL APPROACH TO INVESTMENT STUDIES*

O. K. BURRELL
University of Oregon

IT IS IMPOSSIBLE to define an investment study with any precision. In investment we are interested in what the world will be like tomorrow, and consequently almost any kind of general economic inquiry or analysis may be significant from the point of view of investment. In spite of the difficulties of definition, there is such a thing as an investment study. It is perhaps useful for our purposes to divide such studies into the following categories:

1. Value studies. These are studies based on cross-cut analysis of value elements in industry groups and particular securities. They are necessarily based on explicit or implicit assumption regarding the future.

2. Tests of the results of alternative investment or speculative policies. The studies of Edgar Lawrence Smith, Van Strum, Rose, Rodkey, and others were based upon this method. More recent studies of formula planning have also followed this method. Essentially this method measures the results of a given policy over what is believed to be a representative segment of time.

3. Studies of market structure. These studies involve essentially the behavior of markets and the relationships and patterns of prices. They include a wide variety of topics having to do with market response to both internal and external factors.

This paper is concerned primarily with studies classified here as studies in market structure. Our thesis is that the behavior of markets is but a reflection of relatively constant human behavior patterns and that experimental studies designed to reveal how men behave in the market may be of value in understanding how security markets work.

* This article by O. K. Burrell and the following two articles, one by C. Sidney Cottle and W. Tate Whitman, and the other by Henry S. Schneider, were presented at a meeting of the American Finance Association in Chicago on December 29, 1950. The general subject discussed was "Inductive Tests of Investment Theories." The program was under the chairmanship of Benjamin Graham, Graham-Newman Corporation.

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It is difficult to adapt the experimental method to investigations in finance because it is difficult to approximate the circumstances under which economic decisions are made. But the extensive use of the experimental method in psychology suggests that it may be possible to devise valid experiments that will add to our understanding of how markets work. This does not mean that we should abandon the more conventional types of investment or economic studies. It is only suggested that experimental studies may add to our knowledge of markets and perhaps even be useful to investors in avoiding errors. If, for example, we discover a definite behavior pattern we may be able to infer a resultant security price pattern. We may then logically go to price-volume data to see if such a pattern exists. If it does not appear to exist, then either the analysis of investor behavior was unsound or other forces have outweighed and overshadowed the effect of the particular behavior pattern.

If we are to undertake experimental studies we must clearly understand that the experimental method is not likely to yield quick and spectacular results. We must not be too quick to accept conclusions based on a single experiment. Experiments must not be conceived as a means of pointing the way to quick profits in the stock market. The experimental method has limited application at best and should be thought of as a means of increasing our understanding of how markets work and without too much immediate concern over how the results should influence investment behavior.

It is perhaps in order here for purpose of illustration to review and report on two experiments, one published and one unpublished.

The first of these was published under the title, *An Experiment in Speculative Behavior*.[1] It attempted to measure investor-speculator response to price level and to price change and to dividends. The experimental group was a class of about forty students in investments. From this group thirty-three usable sets of data were obtained. Six class sessions were required to complete the experiment. The assigned objective was to obtain the greatest possible growth in funds including both capital gains and dividends. A method of record keeping was devised which was audited after each class session. Each student started out with a theoretical cash fund of $20,000 which was required to be invested in a group of six stocks. These stocks were designated simply as A, B, C, D, E, and F. The dividend rate and the regular dividend dates of each stock were indicated and the stocks were assigned quality ratings.

1. Bureau of Business Research, University of Oregon, 1950.

The opening prices of the six stocks were placed on the blackboard and students given an opportunity to arrange the initial investment. Students then carried stock and cash balances to the second transaction sheet and immediately turned in transaction sheets covering the initial transactions. As soon as these were collected, prices for the second month were placed on the blackboard and the process repeated over a theoretical period of thirty-six months.

The pattern of price changes as well as price levels were arranged in such a way as to permit test of predetermined hypotheses of behavior. In general the stocks were arranged in pairs. Two stocks were alike in quality ratings, dividend yields, price earnings ratios, and direction of movement. The only difference was that one was a high-priced stock and one was a low-priced stock. Incidentally the high-priced stock was split in the twenty-ninth month, permitting measurement of response to reduction in unit price. One stock was made to go erratically downward and one upward. Two of the stocks were similar in all essential particulars except that one had a much higher dividend rate than the other.

In order to permit test of results of speculation in a fluctuating but trendless market the pattern of prices was so arranged that the weighted average was the same at the beginning, at midpoint, and at the close.

The results of the test were not particularly surprising. For the most part the behavior traits revealed were those known to any good customers' broker. There was indicated a strong tendency to buy dividends. Where other factors remained constant, a preference was shown for higher dividend yields; a very distinct tendency to sell on a small increase from cost but to hang on like grim death and even to add to holdings as the price moved below cost. Negatively the experiment indicated no inherent tendency toward speculative losses in a fluctuating but trendless market. Neither was there any evidence of preference for low-priced or high-priced stocks as such.

The results of the experiment generally tend to confirm other studies of market behavior which have been based on analysis of the market itself. The tendency to buy dividends serves to explain why stocks drop the full amount of the dividend on the ex dividend date even though income tax considerations would seem to indicate a typical decline of something less than the dividend. The distinct tendency to identify value with cost, implicit in taking short profits and long losses, affords a behavioristic explanation of the well-known theory of resistance points or resistance areas. Perhaps the best statement

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of this idea is to be found in John Burr Williams, *Theory of Investment Value*.[2] In the formulation or statement of this theory Mr. Williams clearly implied that men behave in the way that this experiment seems to demonstrate that they do behave.

The experimental group displayed no preference for high-priced stocks or low-priced stocks as such. This would seem to be related to the question as to whether or not stock splits result in a higher aggregate valuation. Here the evidence is conflicting. I have found that based on the major stock splits of 1947[3] there is no basis for the belief that reduction of unit value serves relatively to increase stock prices. On the other hand, Myers and Bakay[4] report evidence, based on the stock splits of 1945–46, that split-ups exert an upward pull on the price of the stock affected.

This small bit of experimental evidence indicating no preference for high-priced or low-priced stocks as such also bears on the question of relative volatility of high-priced and low-priced stocks. It has been shown[5] that in general low-priced stocks are more volatile than high-priced stocks. I have shown,[6] however, that when a group of high-priced and low-priced stocks are paired for quality there is no marked difference in volatility. The experimental evidence here tends to support the validity of this latter conclusion.

The experimental group was a relatively unsophisticated one and this raises the question as to whether the same results would have been obtained with a more experienced group. In this connection it can be reported that Mr. James W. Wooster, Jr., of the Commonwealth Fund, conducted the same experiment this summer with a group of students in investment at the Rutgers Graduate School of Banking. While the analysis is not yet complete and has not been published, Mr. Wooster advises me that the results generally parallel those described here. Moreover, Mr. Wooster reports that those members of his group whose work is largely in securities management appear to have done no better than those not so engaged.

2. John Burr Williams, *The Theory of Investment Value* (Cambridge, Mass., 1938), pp. 29 ff.

3. O. K. Burrell, "Price Effects of Stock Dividends and Split-ups," *Commercial and Financial Chronicle* (December 2, 1948).

4. John M. Myers and Archie Bakay, "Influence of Stock Split-ups on Market Price," *Harvard Business Review* (March, 1948).

5. See especially Zenon Szatrowski, "The Relationship between Price Change and Price Level for Common Stocks," *Journal of American Statistical Association* (December, 1946).

6. O. K. Burrell, "Price Fluctuations of High Priced and Low Priced Stocks," *Commercial and Financial Chronicle* (April 21, 1949).

An Experimental Study in Price Mechanics

As a further illustration of the experimental approach in investment studies it is possible to report briefly the results of another experiment in what might be called for lack of a better term, the "Mechanics of Price Change."

When the price of a security moves from one price level to another, we may presume it is in response to some change in the basic factors of valuation. These factors may be concerned either with the general economic situation or with the fortunes of the particular industry or company.

But when a security price or security prices in general move from one level to another, it is never, or almost never, a simple straight-line transition. It is rather a seesaw movement with a series of minor interruptions to the central trend.

It is interesting to speculate as to why this is so. We may postulate two possible reasons for this zigzag movement. In the first place when a security price moves from one level to another in response to some basic valuation change, men are not in instant agreement in their appraisal of the changed circumstances. Moreover, appraisals may change from day to day based on the same facts or based on minor additions to the fund of information. In short, the zigzag pattern may merely reflect the shifting appraisals of men who are in the process of making up their mind as to the significance of the new facts. In the second place, the typical zigzag formation may be inherent in the market process itself. It may result from inequality of bargaining power and purely speculative judgments entirely unrelated to valuation. If this is true we would get a zigzag formation even in an artificial or simulated market situation where there could be no possibility of valuation.

One of the cherished ideas of students of market structure is that the volume-price change relationship offers a clue to the direction of market movement. According to this credo when, over a period of time, a stock declines on large volume but rises on small volume the direction of movement is likely to be downward. When over a period of time price increases are accompanied by large volume and price declines by small volume, an upward movement is indicated. It must be emphasized that we are not here underwriting this idea. We are only reporting it.

Probably any market observer would testify that quite frequently this theory seems to work but that sometimes it does not work. No opinion is here expressed as to whether or not it works oftener than

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it fails. It is interesting to attempt to construct a rational hypothesis for this tendency if such tendency exists. It might be urged that it is all based on the greater wisdom of large operators as compared with small operators. But anyone who has even casually observed the SEC reports of insider transactions in relation to subsequent market movements can hardly accept this hypothesis.

For the purpose of this study the following hypothesis is proposed. The volume-price change indicator mentioned above is a factor which is inherent in the nature of markets. From the very nature of markets men seek to sell at the highest possible price and to buy at the lowest possible price. At any given moment and for a given price the supply-demand situation may be either weak or strong. If a security sells at 20 and if there are 100,000 shares for sale between 20 and 22 but there is a demand for only 10,000 shares in the range from 20 down to 18 it is evident that the price is more likely to move under 20 than above 20. If buyers' and sellers' price targets were immutable, trading would simply cease. But price targets are not immutable and as the price fails to advance, an erosion of sellers' expectations occurs. As the price fails to decline to buyers' targets, an upward adjustment of these bids occurs. Not all buyers and sellers participate in this adjustment process but, except in inactive securities, enough do to produce what may be called an equilibrium price which reflects the demand-supply relationship. In the case mentioned this equilibrium price would be closer to 18 than to 20. We are here postulating that at any given moment there is an equilibrium price which reflects the current demand-supply relationship. But this equilibrium price is not necessarily the market price. Differences in bargaining skill as well as luck may result in a market price temporarily above or below this equilibrium. A market order to buy, for example, may serve to push the price at least temporarily above the equilibrium. When the price is above the equilibrium level the volume will be heaviest on declines and lightest on increases. When the price is below the equilibrium level the heavy volume will generally accompany increases and light volume decreases.

We can measure the validity of this hypothesis under experimental conditions where the conditions leading to a given equilibrium price can be controlled. It is more difficult to validate by observation of real markets because of the changing world. Equilibrium prices do not remain constant simply because the world changes. The volume indicator, for example, may show that a security price is above equilibrium but a rise rather than a decline may occur if a brilliant earnings report intervenes to generally raise the level of expectations.

Another question for which we seek an answer has to do with the momentum of price change. When a price moves from one equilibrium level to another, does the movement, of itself, have a self-generating quality and therefore tend to move too far? For example, if a security sells around its equilibrium level of 40 and new circumstances produce a new equilibrium level of 30, is there anything inherent in the bargaining process that would result in a movement from 40 to 25 with a subsequent recovery to 30?

In order to provide at least partial answers to some of these questions an experiment was devised which involved setting up a trading situation with known demand-supply schedules but providing for a shift in supply schedules halfway through the experiment. The experiment proceeded as follows:

1. An investments class of about forty persons made up the experimental group. Each person was given an instruction card which covered buying and/or selling directions. The group was instructed to buy or sell at the most advantageous price not inconsistent with individual instruction cards. They were also instructed, of course, not to show instruction cards to others.

2. Participants were instructed to space their trading over the entire hour.

3. The experiment began at 8:00 A.M. and required one hour for completion. Approximately one-third of the instruction cards included a direction not to enter the market until 8:30 A.M. Selling instructions on such cards called for definitely lower prices.

4. The demand-supply schedules were established in such a way as to yield a theoretical equilibrium price of 40 from 8:00 A.M. to 8:30 A.M. and an equilibrium price of 33 thereafter.

5. Very simple trading rules were established and prices and volume were recorded on a blackboard as trading progressed.

Conclusion

We are not here especially interested in how closely the actual prices approximate theoretical equilibrium levels. We are interested, however, in the movement of prices in relation to theoretical equilibrium levels. In this connection perhaps the most significant observation is the apparent influence of established price. The initial price was 34, six points below the equilibrium price of 40. The price moved up gradually during the first half-hour and attained equilibrium exactly at the end of the half-hour period.[7] If trading had been permitted

7. The effect or bias of the initial price is also suggested in an experiment reported by Edward H. Chamberlin ("An Experimental Imperfect Market") in the *Journal of Political Economy* for April, 1948.

to continue without a change in the supply curve it is possible that the price would have moved above equilibrium in the second half.

When the supply curve shifted at the end of the half-hour, the equilibrium price changed from 40 to 33. In the second half-hour the price declined gradually, reaching the equilibrium price about halfway through this period and declining further to a price of 28 at the end of the hour. The influence of established price seems evident in the movement toward the new level. Approximately half the trading was in the range 37–40. While the fundamental forces of additional supply ultimately brought prices to and below equilibrium, nevertheless the memory of previous prices seemed to exert something of a gravitational pull on subsequent prices.

There is certainly no evidence of a momentum effect. The downward movement was persistent and entirely lacking anything resembling a secondary recovery. Upticks never continued beyond a single transaction but there was no plunge downward on panic selling.

In real markets we do have secondary recoveries. Within the limits of the sample and the experimental design we may postulate that such movements are not inherent in the nature of markets. In the real world supply and demand schedules are not constant. If secondary recoveries are not inherent in the marketing process they can only be explained on the basis of shifting demand-supply schedules, i.e., part of the valuation process. This is to say that the secondary recovery represents a picture of men in the process of making up their minds about valuation.

Within the limits of the sample and the experimental design our hypothesis concerning the volume-price change indicators would appear to be validated. The data were prepared on a cumulative basis with plus and minus increments consisting of the product of the price change and volume of trading. This index was rather modestly above the zero line during the first half-period while the price curve was slightly below equilibrium. When the supply curve shifted and the price decline started the volume indicator dropped sharply. Moreover, this drop in the volume indicator occurred while the price was materially above the new equilibrium. As the new equilibrium was approached, the volume indicator leveled out.

It is, of course, outrageous to assert that this brief experiment proves anything. So far as the data can be depended upon, however, it does appear that the volume indicator is more or less inherent in the nature of markets. When prices are moving to new equilibrium levels the volume indicator seems to be of some assistance in pointing the trend. It must be emphasized, however, that nothing in this ex-

periment proves that the volume indicator is an instrument for predicting changes in the fundamental valuation factors. It is possible that the transactions of persons best informed on industry and company prospects may result in a volume indicator which would be useful in anticipating changes in the basic valuation factors themselves. This brief experiment, however, throws no light on this possibility.

It would not be difficult, however, to devise an experiment to test the usefulness of the volume indicator in predicting a change in equilibrium levels. In our experiment all participants had an equal knowledge of the market. It would be quite simple to provide a few participants with advance knowledge of a change in equilibrium levels. Under these circumstances it is possible that the volume indicator might point the direction of the impending change in price, even before the change in the supply-demand relationship became effective. Whether such an experimental situation would approximate the conditions of real markets is, of course, quite another matter.

If time permitted it would be interesting to discuss the pattern and design of other possible experimental studies. But this would be a topic in itself. After all, the planning and execution of experimental studies in economic behavior as in the natural sciences is advanced by a variety of points of view and repeated experimentation.

In conclusion, then, our thesis is that the experimental method may be of some value in advancing our understanding of the valuation process. Value is not a result of formula or mathematics. Men make markets and therefore to better understand how men behave in the market is to better understand the nature of the valuation process.

We must not be deluded into thinking that experimental studies in economic or market behavior will lead to profit-making formulas. We must view such studies rather as a means of increasing our knowledge of the tangible and intangible forces that make investment values and thereby improve the probability of making wise judgments on the basis of this broader understanding.

TESTING FORMULA PLANS

C. Sidney Cottle
AND
W. Tate Whitman
Emory University

Recognition of the fact that marked fluctuations occur periodically in stock prices and dividends is fundamental to any investment program. In an effort to provide for these cyclical risks, "stock-market timing" has been widely adopted. Specifically, most investors seek to time entry into the market so that stock holdings will be increased in periods of undervaluation and decreased in periods of overvaluation. In other words, they endeavor to "buy bear markets and sell bull markets."

There is general agreement as to the difficulties of timing satisfactorily the purchase and sale of common stocks but much controversy exists as to the method for overcoming them. Many systems have been created and have been employed with varying degrees of success. One of the most significant recent developments has been timing by formula plan.

Within the past ten years investment managers of a constantly growing number of insurance companies, banks, investment trusts, and educational institutions—as well as individual investors—have adopted the formula plan method of stock-market timing. This marked growth has created widespread interest in the formula technique among all types of investors and students of finance.

Nature of Formula Plans

The objective of all formula plans is to sell stocks on a price rise and to buy with a decline. In this manner they seek to protect the fund against some of the losses of a decline and preserve some of the gains of a rise.

Although important differences exist in certain features of formula plans, all plans are characterized by: (1) the elimination—once the plan has been established—of forecasts as to the course of the market, i.e., the direction and extent of any given movement; (2) the division of the investment fund into aggressive and defensive portions; and (3) the employment of rules whereby securities are systematically purchased and sold.

There are two broad types of formula plans: constant-ratio and variable-ratio. A constant-ratio plan seeks to maintain a predetermined stock-bond relationship irrespective of changes in the level of stock prices, whereas a variable-ratio plan strives to vary the aggressive portion of the portfolio in accordance with such changes. An illustration will clarify these differences.

A constant-ratio plan with, say, a 50/50 stock-bond relationship could operate in the following manner. When the value of the equity portion is reduced to, say, 45 per cent of the total as a result of a market decline, bonds are sold and stocks purchased until the two portions are equalized. Conversely, when a price rise increases the value of the aggressive portion to, say, 55 per cent of the total, stocks are sold and bonds purchased until the 50/50 ratio is again restored. Thus, as the market rises and falls, stock-bond transfers will keep the fund at 50/50.

In contrast, if a variable-ratio plan is employed, as the market declines, bonds are sold and stocks bought to increase the stock-bond ratio. As the market rises, stocks are sold and bonds bought to decrease the stock-bond ratio. Accordingly a smaller percentage of the fund is held in equity-type securities when the market is at 300 than at 200 or 100.

Analyzing and Testing Formula Plans

Relying on this brief review to provide sufficient background, let us turn to the problems of analyzing and testing formula plans. We shall discuss, first, the principal factors of analysis; second, historical tests and their role in the examination of formula plans; and third, the results of testing constant-ratio plans.

Factors of Analysis

On the surface, it might seem that yield and capital appreciation are the only important considerations in appraising a formula plan. Although yield and appreciation are the foremost factors, certain others require very careful consideration prior to the adoption of any formula plan. Of primary significance are: the nature of the buying and selling action under the plan, including the duration of periods of inactivity and the composition of the fund during such periods; the comparative risks encountered; the understandability of the plan; and the administrative aspects. The importance of these factors may be readily illustrated.

Buying and Selling Action

Consider first the buying and selling action under a plan. Any plan which historically has pronounced intervals of immobility may be of doubtful feasibility solely on psychological grounds. For instance, one plan examined has been inactive since 1945. This inactivity may be fully justified, but would management—unable to establish with finality the reliability of the formula followed and subject to the pressures which develop as the market rises and falls—eventually have its confidence shattered by a continuation of this inactivity? On the other hand, would a plan which resulted in excessive activity be practical from an administrative standpoint? Furthermore, would a plan which has the possibility of whipsawing a fund be viewed with confidence? These and other aspects of activity must be carefully weighed.

Risks

Risk is a vague term which does not lend itself to standardization or accurate measurement. Moreover, it is difficult to segregate exactly the various types of risks. Nevertheless it is possible to classify roughly the primary risks involved in the use of formula plans and thus provide the basis for whatever appraisal may be possible. Through such classification the nature and variety of the hazards requiring consideration will be brought to the attention of the investor.

The principal types of risks involved are capital risk and income risk. Owing to the greater amplitude of stock-price and dividend cycles over the last twenty-five years, the foregoing hazards have increased. In seeking to reduce this danger formula plans have created, in turn, certain other risks. There is always the possibility that in the future some basic feature in a plan will prove unsatisfactory. There also exists the risk that, regardless of its correctness, a plan will not be consistently followed. In addition, a plan may involve rigidities which eventually will prove undesirable.

The characteristics of plans differ; consequently the degree of risk attaching to various plans is not constant. It is essential that the risk of a plan be determined and appraised in terms of investment requirements.

Understandability

An important consideration in the adoption of a formula plan is the ease with which it may be explained and understood. This is doubly important to institutions handling the trust estates of individuals. In such instances the basic features and operational procedures have to be understood not only by the staff members of the institution but

also by those whose funds they administer. The same is true of investment trusts seeking to sell their shares to the public. Finally, it is essential that the plan be clearly understood by finance committees which, particularly in the case of educational institutions, are usually composed in part of successful business and professional men drawn from fields other than finance.

Administrative Aspects

Prior to the adoption of a plan the administrative costs should be estimated and weighed against any anticipated increased return and against the costs of alternative methods.

Historical Tests

With these primary factors of analysis in mind, let us consider next historical tests and their role in the examination of formula plans. As the success of any formula plan is dependent largely on the nature of unforeseeable market action, it is not possible to determine its effectualness with certainty. Nevertheless testing in detail the operation of a plan over selected periods of the past is essential to adequate appraisal. Experience reveals that only through historical tests can the essential nature of a plan be fully understood and the manner in which it will operate under given market conditions be determined. Furthermore, the operating results derived from such tests provide the basis for evaluating the performance of selected plans in terms of one another and in terms of various types of stock-market fluctuations.

Historical tests cannot reveal the future but they provide answers to such questions as: What would happen under the plan if another 1929–32 type market is encountered? A 1937–39 type? Or a 1946–49 type market? What type of market would cause prolonged inactivity? Could a fund be whipsawed under the plan? Would the plan have operated in an unsatisfactory manner over any past periods? What yield and appreciation would the plan have provided over selected past periods?

Procedure for Historical Testing

If a detailed examination of a formula plan is to be made, a hypothetical fund must be established and operated. Its composition, fluctuations, yield and other characteristics should reflect those of a representative well-managed fund. For this purpose, one has the alternative of either selecting a specific portfolio or using stock and bond indexes to represent the two portions of the portfolio.

The specific portfolio method has the advantages of apparent realism and simplicity and avoids certain problems which arise from the use of indexes. However, based on our own experience and that of others, following this method would involve numerous difficulties. Serious problems of selectivity would arise both at the beginning and at numerous points throughout the testing period. Hindsight would inevitably creep in. Finally, such an undertaking would be extremely time consuming and the results would not justify the substantial statistical cost involved.

Although such vexing difficulties as selectivity and hindsight may be eliminated through the use of stock and bond indexes, this procedure, in turn, presents other problems. Those arising from the employment of a stock index are relatively minor, as it is reasonable to assume that a stock index can be bought and sold. A bond index cannot be employed as readily. In the operation of the bond portion of a portfolio, one is confronted with such problems as maturities and refundings. Bond indexes make no allowance for these factors, accordingly provision must be made for them. Furthermore, procedures must be developed for determining the market value of bonds sold and the income on bonds held. Notwithstanding these difficulties, solutions may be found which render the use of indexes suitable in testing formula plans. It is to be stressed, however, that careful consideration must be given to the specific stock and bond indexes to be employed.

Stock and Bond Indexes Employed

The stock portfolio of the typical institutional investor includes industrial, public utility, and railroad common stocks. In order to reflect the price movement and earnings of a common stock portfolio so diversified, a stock average or index composed of the three types of equities is preferable. For this purpose, we consider Standard & Poor's 90-Stock Index to be a satisfactory general measure of portfolio performance.[1]

Although we use Standard & Poor's 90-Stock Index to represent

1. Standard & Poor's 90-Stock Index is a composite index of fifty industrial, twenty public utility, and twenty railroad common stocks. After a study of numerous measures of stock prices, the Cowles Commission concluded that Standard & Poor's indexes are statistically the best constructed from United States data. See Alfred Cowles, 3rd, and Associates, *Common-Stock Indexes* (Bloomington, Indiana: Principia Press, Inc., 1939), p. 35. Furthermore, *Standard & Poor's 90-Stock Index* has been employed in a comparable way by other research groups. For example, see Arthur Wiesenberger, *Investment Companies* (1950 Edition) (New York: Arthur Wiesenberger & Co., 1950), pp. 74–76 ff. and *A Report by the Trust Investment Study Committee* (New York: New York State Bankers Association, 1949), pp. 81 ff.

the stock portion of the fund, the timing of stock purchases and sales is guided by the Dow-Jones Industrial Average (DJIA). This may appear to be a contradictory procedure. If the 90-Stock Index best represents the changing market value of the fund and the yield, is it not preferable to use the same index for timing purposes?

The DJIA is employed as the timing guide for the following reasons. (1) Nearly all of the plans presently in use are based on the DJIA. Thus the analysis should be in terms of the plans as presently constituted and employed. (2) A comparison of the DJIA and the 90-Stock Index over the period 1926–49 reveals that the turning points of both series are for all practical purposes identical. Also analysis shows that the average annual deviation of the DJIA (adjusted to base 1926 = 100) from the 90-Stock Index was less than minus 8 per cent. (3) Research by ourselves and others on formula plans using moving averages, trend lines, or the "intrinsic value" approach have been in terms of the DJIA.

Standard & Poor's Composite Index of A1+ bonds is used to represent the bond portion of the fund. This index typifies a conservatively managed bond portfolio and yield-wise is comparable to New York legal bonds (excluding 7-a rails).

Valuation of Bond Portfolio

Since the valuation of the bond portfolio presents several knotty problems, we should also like to explain briefly the techniques employed in this respect. First, it is assumed that all bonds are purchased at par at the prevailing yield rate. For example, if the average yield on A1+ bonds in January 1926 was 4.80 per cent, the assumption is that any bonds bought in that month bear a coupon rate of 4.80 per cent and sell at 100. In this manner the complications resulting from buying at discounts or premiums are avoided. Second, it is assumed that bonds are redeemed at par. Third, it is assumed that the composition of the bond portfolio is always spread evenly between maturities from one to twenty-five years. Thus in the absence of marked refunding, 4 per cent of the portfolio matures annually. In those years in which heavy refunding occurs the 4 per cent rate is increased. In this connection a refunding schedule developed by the Trust Investment Study Committee of the New York State Bankers Association is employed.[2] Fourth, it is assumed that the refundings do not change the composition of the fund maturity-wise. This point may be attacked the most readily, because clearly heavy refundings

2. *Op. cit.*, p. 99.

would tend to "stack up" bonds in the longer maturities. But any attempt to compute probable maturities and to make compensating adjustments in the fund presents overwhelming difficulties.

On the basis of the preceding assumptions, the market value of the bond portion at any given time is arrived at by (1) determining the weighted coupon rate on bonds held, (2) assuming that twelve and one-half years is the average maturity of bonds held, (3) determining the current yield on A1+ composite bonds, (4) determining at the current yield the market value of a twelve and one-half-year bond paying the weighted coupon rate, and (5) applying this market value to the bonds held. To illustrate, if at the end of 1949 the weighted coupon rate on bonds in the fund was 3 per cent and the current yield on the A1+ composite was 2.55 per cent, then the market value of the bonds is taken to be the value of twelve and one-half-year 3 per cent bonds yielding 2.55 per cent.

It is to be pointed out that this procedure assumes no downgrading. Any change in the market value of the bond portion is confined solely to a change in the interest rate. Thus losses can occur only from the sale of bonds in periods of rising money rates and not from any of the other hazards which confront the bondholder. Because it is well known that downgrading and defaults were widespread throughout the early thirties, the proposed technique favors bonds. Thus comparison with stock experience is biased in favor of bonds. On the other hand, it is to be pointed out that no allowance is made for refundings at a premium. In our opinion the remaining bias is not sufficient to be detrimental to a study seeking to test the operation of a common-stock timing device.

Test of Constant-Ratio Plans

The preceding technique has been employed in analyzing and appraising several kinds of plans. To demonstrate the significant information which can be developed through such historical tests, let us here consider briefly the testing of constant-ratio plans. Although several constant-ratio plans were examined, consideration is given to a plan employing a 50/50 stock-bond ratio. This plan is better known and more readily lends itself to explanation.

As previously stated, the objective of a 50/50 constant-ratio plan is to equalize the stock-bond proportions whenever a stock-price rise or decline is sufficient to cause the fund to be substantially out of balance. Prior to the establishment of such a plan, the extent to which the fund should be out of balance before stock-bond transfers are made must be decided. In line with the tests of others, we equalize the two portions of the portfolio when a 20 per cent decline or a 25

per cent rise occurred in the DJIA. This resulted in the fund being adjusted when the proportions had reached 45/55 or 55/45.

As the date of establishment is of primary importance, the following significant starting dates were selected: January, 1926, in order to begin at a moderate level prior to the 1929–32 episode; January, 1930, to determine the results when a fund is originated at a high point in a rapidly declining market; June, 1935, to start at a reasonably recent market level close to the trend lines employed in the Vassar and Oberlin Plans; and March, 1937, to initiate a fund near a recent peak from which there was a marked decline.

The four funds were started with an investment of $10,000 each. Two facts stand out. First, as of the end of October 1950, all of the funds showed some appreciation. The values at the ending date were for the four tests, respectively: $15,482; $11,556; $15,342; and $11,007. Second, those funds which were started at high points in the market were "under water" for considerable periods. In the explanation of these two facts lies the key to an understanding of constant-ratio type plans.

Consider first the capital appreciation which occurred. Although the level of stock prices at the close of October, 1950, was somewhat higher than at the starting point of three of the funds, the appreciation shown does not result solely from this fact. This may be readily demonstrated by a comparison with 50/50 buy-and-hold plans initiated on the same dates. For example, the appreciation under the equalizing plan established in 1926 was nearly $5,500 whereas that of its counterpart in a buy-and-hold plan was less than $3,000. The difference is due to the fact that under a constant-ratio plan transfers from stocks to bonds in a price rise preserve some of the gains and transfers from bonds to stocks in a decline reinvest these gains at lower levels.

This simple technique assures, in so far as timing is concerned, a modest appreciation whenever the market completes a "round trip." In other words, some gain must result whenever stock prices rise above or drop below a starting level and then return to that level. To illustrate, if the market falls from 100 to 80 and returns to 100, a $10,000 50/50 fund would show a $125 capital gain. In these small but repeated gains lies the strength of a constant-ratio plan.

The second fact is the number of years that the plans started in 1930 and 1937 had a market value below the original investment. We wish to stress the point that, contrary to general belief, some forecasting is involved in establishing a constant-ratio plan. Specifically, there is an underlying prediction that in the course of their fluctua-

tions common-stock prices will not for an extended number of years remain below the level at the time the plan is inaugurated. Because of the limited capital appreciation under a constant-ratio plan, a small error in this one prediction may involve a loss which will require a considerable number of years to recover. The plan established in January, 1930, had a market value below $10,000 over most of the fifteen-year period up to 1945.

Let us summarize, in terms of the previously set forth factors of analysis, the other results of our tests. We found the buying and selling action under the plan reasonably satisfactory. The frequency with which stocks are purchased and sold under a constant-ratio plan is primarily a function of the interval selected between action points. As the interval employed rests with the investor, the amount of activity may be controlled to a considerable degree. The primary factor in this respect is to avoid overaction with its attendant brokerage commissions and administrative problems.

An outstanding feature of the constant-ratio plan is its simplicity. Thus from the standpoint of understandability, this type plan presents no difficulties. Furthermore, for the same reason, it should present no major mechanical problems of administration.

Our studies indicate that a constant-ratio plan is worthy of careful consideration by certain institutional investors. Although the gains are not great and although it may be outperformed by other plans, the constant-ratio plan is characterized by simplicity and a notable degree of safety.

Restricted as this has been to the general results of examining a single plan, only the broader aspects of historical tests of formula plans have been presented. Further insight could be obtained from following tests step by step as the market rises and falls. In this manner such separate features of a plan as intervals between action points or percentage ratio between stocks and bonds may be evaluated. In addition, the results of these tests constitute the best basis we have found for a comparative analysis of plans. Thus, in our opinion, historical tests provide the investor with information essential to an appraisal of formula plans.

TWO FORMULA METHODS FOR CHOOSING COMMON STOCKS

HENRY S. SCHNEIDER
Wertheim & Company

I. SELECTION OF INDUSTRIAL STOCKS BY FORMULA

ONE OF THE PRIMARY problems of common stock investment has been the determination of some central value about which market prices could be expected to fluctuate in the future. One approach to this problem has been based upon the use of the past average price of the Dow-Jones Industrial Stock Average. Thus several formula timing plans have been geared to the price record of this Industrial Stock Index. Under these the investor is instructed to purchase stocks when the Index is selling sufficiently below its previous five- or ten-year average price, and to sell when the Index is somewhat above the past average.

The purpose of this research was to test this criterion of past average price, not as applied to the Dow-Jones Industrial Average itself, but to the individual stocks within the index. For purpose of testing we decided to select two groups of stocks, each comprising roughly one-sixth of the number in the Index. The first group consisted of the stocks selling highest in relation to their past average prices, and the second group consisted of those selling lowest in relation to their past average prices. We called the two groups "Dear" and "Cheap" respectively. For our dates of selection we used year-end prices in all cases. The past average price of each stock was usually taken as the mean of the annual highs and lows for five years prior to the date of selection. (In earlier years the five preceding year-end prices were averaged.) The period of testing covered the thirty-five years 1914 through 1948. In each year of this period we selected the two groups of stocks, and then tested the market performance of each group against the Average itself as shown by the prices of one, two, and three years later.

Illustration of the method of testing.—Our method of testing was very simple and I shall illustrate by starting in the year 1914. We first computed the 1910–14 average price for each stock in the Index; we then took the market prices of the individual stocks in the Index as of December 31, 1914, and divided each by its own past five-year average price. The resulting precentages were arrayed in numerical

order ranging from the highest to the lowest. The top one-sixth of the stocks were chosen for the Dear group and the bottom one-sixth as the Cheap group. We then measured the percentage price movement of the Dear group, Cheap group, and the Industrial Average itself one year, two years, and three years later, as though one share of each stock had been purchased on December 31, 1914, and then sold out on December 31, 1915, 1916, or 1917. In 1915 we followed the same pro-

TABLE 1

PRE-NEW DEAL RESULTS (1914–1931)

A. TOTAL PERCENTAGE PLUSES AND MINUSES

	One Year Tests (18)	Two Year Tests (18)	Three Year Tests (18)
Cheap group:			
Total of plus years	+ 168	+ 464	+ 469
Total of minus years	− 198	− 254	− 276
Grand total	− 30	+ 210	+ 193
Dear group:			
Total of plus years	+ 378	+ 507	+ 592
Total minus years	− 187	− 252	− 238
Grand total	+ 191	+ 255	+ 354
Dow Jones Industrial Ave.:			
Total of plus years	+ 244	+ 431	+ 487
Total of minus years	− 173	− 221	− 227
Grand total	+ 71	+ 210	+ 260

B. GROUPS

	Dear	Cheap
Number of tests in which group did 5 per cent (or more) better than D-J Average	31	13
Number of tests in which group did 5 per cent (or more) poorer than D-J Average	17	27
Number of tests in which percentage movement was similar to D-J Average (remaining tests)	6	14
Total number of tests	54	54

cedure as the foregoing in selecting the two groups of stocks; only this time we used 1911–15 average prices and 1915 year-end prices. The same was done in all subsequent years through 1948. Thus three tests were made from the groups in each year of selection (except, of course, for 1947 and 1948).

Results of study: two periods.—After preliminary study, we divided the results of our tests into two periods: (1) Pre-New Deal Era (1914–31) and (2) New Deal Era (1932–48). The reason for this division was the strikingly different results obtained in the two periods. For we found that during the 1914–31 period the Dear group performed considerably better than either the Cheap group or the Dow-Jones Industrial Average. But with the advent of Roosevelt, the situation was reversed and the Cheap group turned in by far the best

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performance consistently as well as in the aggregate. For purposes of presentation I have broken down the results for each period into two groups: (1) the aggregate percentage pluses and minuses for each group for the one-, two-, and three-year tests, and (2) the number of tests in which the Cheap or the Dear groups did 5 per cent (or more) better than the Dow-Jones Average, 5 per cent (or more) poorer, and the same as the Dow-Jones Industrial Average. Dividend receipts and commissions are excluded from our figures.

TABLE 2

NEW DEAL RESULTS (1932–48)

A. TOTAL PERCENTAGE PLUSES AND MINUSES

	One Year Tests (17)	Two Year Tests (16)	Three Year Tests (15)
Cheap group:			
Total of plus years	+ 425	+ 570	+ 754
Total of minus years	− 51	− 54	− 47
Grand total	+ 374	+ 516	+ 707
Dear group:			
Total plus years	+ 250	+ 330	+ 406
Total of minus years	− 90	− 129	− 134
Grand total	+ 160	+ 201	+ 272
Dow Jones Industrial Ave.:			
Total of plus years	+ 239	+ 335	+ 417
Total of minus years	− 74	− 87	− 74
Grand total	+ 165	+ 248	+ 343

B. GROUPS

	Dear	Cheap
Number of tests in which group did 5 per cent (or more) better than D-J Average	11	34
Number of tests in which group did 5 per cent (or more) poorer than D-J Average	23	1
Number of tests in which percentage movement was similar to D-J Averages (remaining tests)	14	13
Total number of tests	48	48

Comparison of the two periods.—In the first period the advantage shown by the Dear group appears not only in the better aggregate percentage gains, but impressively also in the number of separate favorable performances as against unfavorable ones. The Cheap group presents an almost exactly reverse picture in comparison with the Dow-Jones group as a whole. When we move on into the second period the transformation is extraordinary. The aggregate percentage results of the Cheap group are now far in the lead. More striking still is the fact that in only one test out of forty-eight did the Cheap group perform more than 5 per cent worse than the Average; while in no less than thirty-four tests it beat the Average by more than 5 per cent.

Such consistently favorable behavior could hardly be the result of chance. Evidently it stems from some underlying advantage enjoyed by the Cheap group in the past fifteen to seventeen years. What can this advantage be, and why was it conspicuously absent in the 1914–31 period?

TABLE 3

SUMMARY OF RESULTS (1914–48)

A. TOTAL PERCENTAGE PLUSES AND MINUSES

	One Year Tests (35)	Two Year Tests (34)	Three Year Tests (33)
Cheap group:			
Total of minus years	− 249	− 308	− 323
Grand total	+ 344	+ 726	+ 900
Dear group:			
Total of plus years	+ 628	+ 837	+ 998
Total of minus years	− 277	− 381	− 372
Grand total	+ 351	+ 456	+ 626
Dow Jones Industrial Ave.			
Total of plus years	+ 483	+ 766	+ 904
Total of minus years	− 247	− 308	− 301
Total of plus years	+ 593	+ 1,034	+ 1,223
Grand total	+ 236	+ 458	+ 603

B. GROUPS

	Dear	Cheap
Number of tests in which group did 5 per cent (or more) better than D-J Average	42	47
Number of tests in which group did 5 per cent (or more) poorer than D-J Average	40	28
Number of tests in which percentage movement was similar to D-J Average (remaining tests)	20	27
Total number of tests	102	102

A possible explanation.—The following is advanced as a tentative explanation of these rather perplexing market phenomena. Let us assume that the Dow Jones list consists of thirty large companies, with considerable variations in their quality and apparent long-term prospects, but all possessing the characteristic of resiliency, i.e., the power to recover from adversity. Assume further that the average price-earnings ratios reflect accepted views as to differences in quality. (We suggest that these assumptions properly describe the Dow-Jones list as it has been constituted since 1932.) It might be expected then that the relative price behavior of the individual issues would follow a pattern similar to that of the market as a whole, which means that favorable developments or prospects would tend to receive an exaggerated response on the upside and conversely for unfavorable ones. In due course these exaggerations would be corrected. In the aggre-

gate the issues that had gone up more than the market as a whole would be found to have advanced too far, and they would lose ground, relatively, in subsequent years. Similarly, those that had lagged behind the market would prove to have overemphasized their unfavorable factors; thus they would subsequently advance more than the market as a whole. The relative action of our Cheap stocks and Dear stocks between 1932 and 1948 would seem to conform to this hypothesis.

Why did not this explanation hold good for the earlier years? We suggest the following as the reason. During 1914–31 the market was gradually establishing those wide quality-differentials which have been so prominent a feature of common stocks ever since the New Era bull market of the late 1920's. In 1914 the dividend yields and earnings multipliers for our large companies were rather homogeneous; but as time went on, the "good stocks"—meaning particularly those with favorable earnings trends—became valued more and more generously vis-à-vis the "lower quality" issues. This bias in favor of the quality issues was an accelerating affair; its result was to favor the good stocks in the market year after year, even though they had already outperformed the rest of the list. This bias continued through the Great Depression culminating in 1932. In those years the quality issues appeared to justify the favor previously accorded them, because they showed better resistance to the hard times.

We suggest finally that the quality differentials had been fully established by 1932, so that the bias in favor of the good stocks was now completely reflected in their prices. From then on the basic element of *fluctuation* reasserted itself: good stocks, like good markets, went up too high; unpopular stocks, like unpopular markets, went down too far.

If our explanation is a sound one, we would conclude that the performance in the 1932–48 period is more likely to be duplicated in future years than that of 1914–31. Our method of selecting "Cheap stocks"—or something similar thereto—might therefore prove to offer both an extremely simple and a reasonably dependable key to successful stock selection.

Some additional observations.—Dividend income has been left out of account in our calculations in order to save time and trouble. It is almost certain that the Cheap stocks would return at least as high a dividend yield as the dear ones over any protracted period of years. The relationship between the results on a one-year basis and those on a two- and three-year basis involves some peculiarities of the arithmetic of percentage figures. It is not necessary to go into these, be-

cause our essential comparisons are based on the same number of years' holdings for the Cheap group as against the Dear group.

It may be of interest to add some figures which cover two periods in which the general stock-price level did not show a significant net change, thus excluding the factor of secular trend from our comparisons. Only the one-year tests are presented.

TABLE 4

1914–1931*

	Aggregate Pluses and Minuses
Cheap group	− 30
Dear group	+ 191
D-J Ave.	+ 71

* Dow-Jones Average was 55 on December 31, 1917, and 60 on December 31, 1932.

TABLE 5

1936–1947*

	Aggregate Pluses and Minuses
Cheap group	+ 115
Dear group	+ 15
D-J Ave.	+ 25

* Dow-Jones Average was 180 on December 31, 1936 and 177 on December 31, 1948.

In closing this part of my paper I would like to thank Mr. Menko Rose, Mr. Walter Schloss, and Mr. Bernard Werner for their help on some of the computations, and Mr. Benjamin Graham for his advice and suggestions.

II. Selection of Public Utility Common Stocks by Formula

The second division of my paper summarizes the results of a study covering the field of operating public-utility common stocks for the years 1930–49. The concepts were originated and worked out in great detail by Edward B. Barrett, a fellow-student in the Columbia University Seminar on Valuation of Common Stocks.

The research was divided into three stages. The first represented an effort to determine the most promising criterion for the selection of utility common stocks, and was based upon a complete examination of a single year's characteristics and performance—1948. In the second stage, the criterion thus suggested was applied to all available operating utilities in successive years from 1929 through 1949, and the market results from such selections were compared with those of the utility group as a whole and with other indexes. The results shown were so impressive that, in the third stage, a reason was sought to explain the highly favorable market performance of the stocks selected.

The criterion discovered and used turned out to be—somewhat paradoxically—that of a "low pay-out," i.e., a low proportion of reported earnings distributed as dividends. It was then assumed that each year a selection of one-fifth of all operating-utility issues would be made by the application of this criterion. The market performance of the successive groups so selected was calculated on the basis of one-year's holding, without inclusion of dividends received. When this performance was compared with that of the large group—the "universe"—significant differences (of more than 5 per cent) were found in thirteen out of the twenty years. In twelve out of these thirteen important cases the low-pay-out group performed better than the universe. When the percentage changes for each of the twenty years were added up, the selected groups showed a net gain of 337 per cent against 85 per cent for the universe—an annual average of 16.8 per cent against 4.3 per cent. On a cumulative or annual reinvestment basis, starting in 1930 and ending in 1950, the low-pay-out group showed a final net gain of 456 per cent, while the group as a whole showed a small loss of 3 per cent. Comparisons were made also with the performance of a counter-group consisting of the high-pay-out companies, to the number of one-fifth of the universe. These did not do as well as the entire group, and they therefore fell far below the showing of the low-payers. Comparisons of dividend yields during the second half of the twenty-year period were not unfavorable to the low-pay-out group, but the differences shown were minor. Further investigation revealed that the low-pay-out stocks benefited much more frequently than the entire group from *dividend increases* within a short time after their selection. This circumstance undoubtedly explains in good part the superior market performance of the issues selected by our criterion. Additional details:

How the criterion was determined.—Barrett devised the following method for determining the most plausible criterion for selecting utility stocks. First he made up ten different tentative criteria, representing various statistical ratios. These referred to (1) the percentage of earnings paid out in dividends, (2-3) earnings vs. price, (4-5) capital structure, (6-7) the operating ratio and the percentage of revenue carried down to the common, (8) the percentage earned on total capital fund, (9) the maintenance and depreciation ratio, and (10) the relationship between increases in revenue and increases in expenses, since 1937. He worked out all these ratios for 1948 for each of forty-nine operating utilities, the entire available field in that year. He then divided the forty-nine companies into quartiles for each criterion—preferring to study market behavior by such groups rather

than by individual companies alone. Similarly, he calculated the market performance for each common-stock issue for the twelve months from March, 1948, to March, 1949, and again divided them into quartiles ranged downward from the best to the poorest performance. His next step was to correlate the various "selection criteria" with the performance records.

Barrett found that out of the twelve companies with the lowest-pay-out ratio no less than eight appeared in the top market-performance quartile. Conversely, ten out of the twelve highest-pay-out issues appeared in the two poorest quartiles of performance. This correlation was more impressive than that offered by any of the other criteria, although the simpler one of buying issues earning the largest per cent on price came a close second. (Barrett therefore suggests that someone should make a study parallel to his, but using this price-earnings-ratio criterion.)

Testing the pay-out criterion over a period of years.—Barrett did not compare his original ten criteria in any other sample years, but adopted low-pay-out as his hypothetical touchstone, and proceeded to test it out first for a ten-year and ultimately for a twenty-year period. His comparisons were made (1) with the group as a whole, (2) with a subgroup consisting of the highest-pay-out stocks, and (3) with the two available utility-stock indexes. Over the twenty-year period the Dow-Jones and the Standard-Poors Indexes did not do quite as well as Barrett's entire group, thus underlining the favorable results obtained by comparing the low-pay-out issues with their universe. These results have improved over the course of the period, as is seen by the comparisons of successive five-year totals of the annual percentage changes in market price shown in Table 6:

TABLE 6

Five-Year Total for	Low-Pay-Out Group(in Per Cent)	Entire Group (in Per Cent)
1930–34	Loss 77	Loss 89
1935–39	Gain 149	Gain 79
1940–44	Gain 166	Gain 57
1945–49	Gain 99	Gain 39

The only instance in which the low-payers performed significantly worse than the entire group was in the early period of maximum depression 1931–32. Their loss in that year was 47.1 per cent, against 41.9 per cent for the "universe."

Barrett also made a check, covering the years 1941–50, of the relative market performance of the individual stocks in his low-pay-out groups. He found that in forty-one cases out of eighty-two their per-

formance ranked in the best performance quartile of the universe, and in only thirteen cases they fell into the poorest quartile.

Explanation of results shown.—The low-pay-out issues were intrinsically cheaper than the others because their small dividend held their price down in relation to their earnings. Furthermore, they were more likely to benefit from dividend increases than other utilities. Such increases, if they eventuated, could be expected to exert an important upward influence on subsequent market price. Barrett assumed that later dividend performance would be found to yield the clue to the favorable market performance, and he studied the actual data over the nine-year period March, 1941 to March, 1950. He found that there were fifty-seven dividend increases in these years, and thirty of them applied to stocks in the low-payer group. This is nearly three times as many as their numerical proportion would have warranted. It is clear that the group selected was aided significantly by these dividend actions; it may have been helped as well by anticipations of additional dividend increases.

It should be unnecessary to add that the superior market performance of the low-pay-out stocks by no means justifies a corporate policy of niggardly dividends. The truth is just the opposite. A niggardly dividend holds the price down and is clearly harmful to the rank-and-file stockholder. It favors the sophisticated and alert investor, who is enabled thereby to take advantage of the less expert among the public stockholders by buying the low-pay-out issues at unduly low prices.

The factor of capital structure.—A low-pay-out ratio is often occasioned by a low ratio of common stock to total capital. In such cases we do not have the usual grounds for expecting a step-up of the dividend. Barrett made a supplemental study to determine whether it would be better to exclude from the group selected all common stocks with equities below either 25 per cent or 20 per cent of total capital. The results were not conclusive. They indicated that such exclusions would produce better results in years of declining prices, but not in good and bad markets taken together.

Conclusion

We venture the conclusion that both of these studies yield sufficiently definite and impressive results to offer something of tangible value to investment policy. Many additional investigations of the same type remain to be made, of course, before the ideas set forth may be considered as fully explored. However, there comes a point when action in accordance with the indicated results becomes preferable to further investigation.

REAPPRAISAL OF THE EASY MONEY POLICY

THE ROLE OF INTEREST RATES IN A CHANGING WORLD*

HENRY C. MURPHY†
International Monetary Fund

TWENTY-FIVE YEARS AGO few economists would have had much difficulty in defining the role of interest rates in a capitalistic world, changing or otherwise.

Interest rates, they would have said, have a twofold function.

On the one hand, interest must be *received* in order to induce saving. People naturally prefer present goods to future goods. To be sure, some saving would occur from precautionary motives even if no interest could be obtained by the savers. But to secure a substantial amount of saving—possibly even to secure enough to keep capital intact—some interest must be promised the savers; and within limits the higher the rate promised the greater will be the amount of saving.

On the other hand, interest must be *charged* in order to discourage excessive capital formation. Projectors are swarming everywhere. Unless capital is made sufficiently expensive to them, investment will be excessive. Aggregate demand at existing prices will then exceed aggregate supply and prices will rise. Of course, this can happen only if there is an excessive expansion of money and credit. But too low interest rates would themselves cause such an excessive expansion.[1] Higher interest rates would cut back the excessive investment, the excessive credit creation, and the unnecessary price rise all in a single

* This article by Henry Murphy and the following article by Lester V. Chandler, with discussion by Howard R. Bowen, were presented at a joint meeting of the American Finance Association and the Amercian Economic Association in Chicago on December 29, 1950. The general subject discussed at the session was "Reappraisal of the Easy Money Policy." The program was under the chairmanship of Fritz Machlup, The Johns Hopkins University.

† The author is a member of the Staff of the International Monetary Fund. The opinions expressed in this paper, however, are his own and do not necessarily reflect those of the Fund.

1. I ignore here the so-called banking principle or "real bills doctrine" which seemed to hold, at least in its pure form, that there could be no excessive expansion of bank credit irrespective of interest rates, if all loans were made for the purpose of providing working capital for bona fide self-liquidating business transactions and were repaid from the proceeds of the sale of the goods for the production or marketing of which the money was borrowed.

stroke. If, on the other hand, the opposite set of conditions prevailed—if interest rates were too high, credit was contracting, and prices were falling—the situation could be remedied by a decline in interest rates. But, it might have been added, too rapid results should not be expected in this direction, as an existing crop of projectors can be mowed down more quickly than a new crop can be raised up.

This description of the economic thinking of twenty-five years ago has been very much simplified and I should apologize to this audience for its lack of subtlety. But it is accurate in its broad outlines and it sounds very persuasive even today. Yet it would no longer be accepted in its entirety by a large number of economists. What then are the causes which have made it to go out of favor? And to what extent have these causes been real and valid and to what extent have they been merely passing aberrations?

The causes are to be found partly in the world of thought and partly in the march of economic events. I am no person to depreciate the influence of pure thought, and in this case the influence of the greatest economic thinker of our times is involved. But I believe, nevertheless, that in the present instance the influence of the march of economic events has been more important. The two types of causes have, of course, been intermingled—the thought being affected a great deal by the events, and the events a little by the thought.

In the realm of thought there have been three developments which have tended to undermine the schematic treatment of interest rates generally accepted a quarter of a century ago. These developments appear devastating when they are enumerated, although perhaps they are not quite as devastating when they are analyzed and weighed. It has been contended: first, that there is no significant functional relationship between interest rates and the amount of saving; second, that there is no significant functional relationship between interest rates and the amount of investment; and third, that interest rates, in fact, measure quite a different thing from the relationship between saving and investment, namely that they measure the relationship between the amount of liquid funds and the desire to hold them. I shall return briefly to each of these theoretical points later in this paper.

Let me first, however, enumerate the three developments in the world of economic events which have taken place in the same period. Here, as in all institutional sections of this paper, I shall be concerned primarily with developments in the United States, making only incidental reference to conditions in other countries.

First and foremost has been the Great Depression of the thirties. After ten years—twenty semesters—in which human and material

resources had run to waste, it hurt the heart to explain to the theory class in the twenty-first semester that it was the function of interest rates to limit investment to that which could be supported without inflation. The heart wanted a better answer even if the head could not yet supply it.

Second among the institutional reasons for the diminished acceptance of the old interest rate theory has been the increase in the area of direct government control. In time of war or national emergency the interest rate seemed a curiously inappropriate mechanism for allocating funds between the government and private economy, and much better and more direct methods seemed to be available for allocating funds even within the private economy. In the postwar period the area of government controls contracted, but the effective operation of the mechanism of the interest rate ran into other difficulties—difficulties so hard to express in a few words that I shall leave even a statement of their character until later in this paper.

Third and last of the institutional causes for the decline in the old interest rate theory has been the dissolution of the interest rate itself into that modern welter of complexities called the term structure or "pattern" of interest rates. Of course, there has always been a term structure of interest rates and the old discussion of "the" interest rate was an easy abstraction. But the realities of the market place in the old days were not such as to discourage the scholar too greatly and it was not too hard to believe that behind each term structure there was a "real" interest rate which lenders and borrowers at different terms were trying to approximate. This has become harder to believe nowadays. For example, no one seriously believes any longer that a series of one-year rates will tend to average out in the long run to the long-term rate prevailing over the same period. The term structure of rates has become itself an ultimate reality and its economic function in terms of the allocation of real resources is much harder to explain than was the economic function of the old supposedly unitary rate. (At this point I should like to note in passing that there is little correlation in practice between the liquidity of debts and the liquidity of the real resources which they supposedly finance, and that no more than lip service is paid nowadays to the ideal that there should be. The real resource behind the most liquid of all debts, Treasury bills, consists of a military victory which may have to be re-won.)

So much for a rapid review of the three principal theoretical influences and the three principal institutional influences which have undermined our old views of the functioning of interest rates. Let us now run through them again in somewhat more detail.

Developments in the Interest Rate Theory

Relationship between interest rates and saving.—First, we have the allegation that there is no significant functional relationship between the amount of saving and the interest rate. On the whole, it seems to me that this contention has been successfully maintained. The old texts never made out much of a case that there really was a significant functional relationship of any particular shape between interest rates and saving. The man who saved more because he got higher interest rates (and it therefore paid him to do so) stood in the body of the text, and the man who took out enough life insurance to leave his wife a life income of $100 a month and had to pay a *higher* premium on it—that is, had to save more money—because interest rates were *lower* stood in the footnote. But the man in the footnote always seemed more like the man next door. He could not get up into the body of the text because he did not fit in with its theoretical framework. He was a nuisance. But with the decline in the prestige of the whole framework, he has asserted his supremacy over his hypothetically hedonic neighbor.

There are only two arguments that still seem solidly in favor of believing that there is a significant functional relationship between interest rates and saving of the shape assumed by classical theory. The first of these is the simple one that interest is a highly progressive form of income, and that a higher proportion of large incomes than of small incomes tend to be saved. Therefore, if interest income is a larger proportion of the national income, more of the total income will go to the saving classes and more of it will consequently be saved. The second argument is the likelihood that, if interest rates are low, many retired persons, widows, and others will dip into their principal to a greater extent than they would if rates were higher. Each of these arguments would tend toward the belief that there is a positive functional relationship between interest rates and saving. Against them must be set the powerful statistical factor of the much greater volume of saving necessary to provide a given income in old age or for one's dependents after death when rates are low than when they are high. I have no method of measuring these offsetting tendencies, but I would conclude personally that the functional relationship between interest rates and saving, whatever its shape, is relatively small.

Relationship between interest rates and capital formation.—Next, we come to the allegation that there is no significant functional relationship between interest rates and capital formation. This allegation has had a great vogue during the past decade. Personally, I do not find it very convincing. The old texts made out a pretty sound case,

and by and large, it seems to me, that it has stood up very well. When the man next door wants to buy a house he says to the real estate man, "I can pay $100 a month, show me the best house that I can get for that money." The lower the interest rate, the bigger and better house he is able to buy, although, of course, not in proportion to changes in the interest rate, since other factors than interest rates affect the (monthly) cost of housing. But the aggregate amounts involved, in terms of hundreds of millions of dollars of the total investment in the United States for each 1 per cent change in the mortgage interest rate, nevertheless are important. Interest rates here are a potent factor in determining, the amount of total investment; and low mortgage interest rates consequently have been an important factor in the postwar inflation.

While housing is the most important single case, the same principles apply in all high-capital-intensity industries, that is, in all industries in which the return on capital is an important part of total costs, for instance, subways. Think of what could be done if only 0.5 per cent had to be paid for capital used in urban transit. The transit would be swift and silent. And, of course, if the rate were not appropriate the onrush of inflation would be swift and silent also. But that is not to the present point. The present point is merely that there is a very real functional relationship between interest rates and investment.

But, of course, there is a hitch in the argument. It has been determined by questioning businessmen that they care no more about interest rates than Farragut did about the torpedoes. They either damn them and go ahead, or they do not go ahead at all, depending on how they feel about other things. The same inquiries have, of course, also established that businessmen do not give a damn for marginal costs and price their products strictly on the basis of average costs. I prefer to believe that the inquiries show simply that businessmen do not introspect.

Therefore on the whole, it seems to me that the second of the attacks made on the old theory of interest rates—that there is no significant functional relationship between interest rates and the volume of investment—has not been made good and that the old theory still stands in that respect.

The liquidity preference theory.—I shall pass very lightly over the third of the major developments in thought which have occurred in this field in the past twenty-five years, namely, the development of the liquidity preference theory of interest rates, and hasten on to institutional developments. It may seem perverse to say so little on what has been a major theoretical development of the period. But a

great deal has been said about it and there is little that I can add within the framework of this paper. For our present purpose, it seems sufficient to note that the liquidity preference theory is principally an explanation of how interest rates come to be what they are and of how they can be changed and not an account of how they affect the economy, or of their appropriate role as instruments of public policy, which are the major concerns of this paper.

So much, then, for developments in thought; now let us turn to the march of events.

Institutional Developments

The Great Depression.—The Great Depression of the thirties was an entirely new experience for the capitalistic world. It is futile to argue over whether there ever has been, in fact, a period of as long duration in which such a large proportion of our available resources were unemployed. Experience is not necessarily correlative with the objective event. An event is an experience only to the extent that it is real and actually experienced. And never before had the duration and extent of our unemployment been so driven home and rubbed in by so many cunningly contrived statistics to show how well we were not doing. Furthermore, the old fatalism with which man had accepted economic fluctuations was passing. A new confidence and a new social conscience were arising. The new confidence told man that he could shape his economic environment, while the new social conscience told him that he must.

The new conviction that a depression was a challenge to be met, rather than an ordeal to be endured, had two manifestations which I shall characterize as the left-wing and the right-wing views respectively.

The left-wing view was that depressions were to be overcome by detailed planning. There were to be rules and regulations prescribing what was to be produced, and the people were to be set to work producing those things. I do not mean to caricature this view by so brief a statement. There is a great deal to be said for such planning in many areas of the economy. But, even if my sympathy were not strongly with the right-wing view, as it is, a further discussion of the left-wing view would still be outside the plan of this paper.

The right-wing view of how to control our economic environment was embodied in the monetary policy. (Fiscal policy came later.) So, after the disastrous fall and winter of 1931, during which the armies of monetary policy pitched their tents in winter quarters at the Federal Reserve Board, they advanced cautiously in 1932 and then more boldly in 1933.

We shall never know how much worse conditions might have been if the armies of monetary policy had not advanced at all, but still the results were disappointing. Excess reserves were built up to over $5 billion before the outbreak of the war in Europe, and the main result was, not full employment, but new extremes in the term structure of interest rates! Consequently, intellectual interest in the late thirties tended to shift from monetary policy to fiscal policy. But we shall not follow it in this shift. It is the business of this paper to stick to monetary policy to the end.

Trying to increase employment by reducing interest rates seemed as impossible as trying to push a string: the string looped itself into all sorts of odd shapes but would not go where you wanted it to go. There were two main difficulties. In the first place, the communications between short-term and long-term interest rates proved to be weak. Short-term rates were held at near-zero from the spring of 1933 to the spring of 1937; and then, after a short lapse while the monetary authorities were fighting a phantom boom, remained near-zero until the fall of 1941. But long-term rates during this period fell only from about 3.25 per cent to about 2.5 per cent, and they took their time in doing it. But, more important, there was a deficiency of borrowers at the new lower rates. Businessmen would not borrow enough and real resources kept on running to waste. Consequently, at the end of the decade there was a general defeatism with respect to the efficacy of monetary policy. One consequence of this defeatism was the tendency to turn toward fiscal policy to which I have already referred.

Personally, I do not believe that the defeatism with respect to monetary policy was entirely justified. But, to discuss this view would take me away from that aspect of the easy-money policy to the appraisal of which this meeting is primarily addressed. Therefore, I shall proceed directly to wartime monetary policy.

The war.—The war gave the situation an entirely new turn. In the course of a few months we passed over from a situation in which resources were running to waste to one in which they were scarce and had to be conserved. But another reason was then found for an easy-money policy. I do not say this with any element of sarcasm, because I was one of those who helped to find the new reason and I believe that the finding was entirely valid.

There were two over-all conditions which dominated wartime monetary policy.

In the first place, the government was not merely the chief borrower; on net balance it was the only borrower. The amount of its borrowings was determined, and should have been determined, by the needs

of the war effort and by tax policy. I believe that tax policy should have been much stronger, but it must be treated for this purpose as an independent variable. Federal borrowing could not have been, and should not have been, discouraged by higher interest rates. The borrowings of private parties, on the other hand, were so effectively controlled at the physical level that higher interest rates could not have had any material effect on them; nor did the authorities believe that higher interest rates would have had a significant effect on the amount of saving. So there seemed to be no good reason for higher interest rates during the war. There was, of course, a lot of squabbling about short-term rates, but there was remarkably close agreement about the long-term ones.

In the second place, it was generally assumed that, when the war ended, the problems of the thirties would reassert themselves and full employment would again be a problem. In this context, a rather low interest rate structure in the postwar period could be viewed with some equanimity. Opinion on this point was not as unanimous as on the former one, but few of the dissenters were prepared to change the wartime rate of interest on long-term borrowing substantially in order to meet their views of the probable postwar situation.

At this point, I should like to note in passing that this wartime hypothesis with respect to the postwar economic situation has never really been tested, because it also supposed that when the war closed it would actually *end*. A likely postwar federal budget was spoken of as $15 to $20 billion. We shall never know what might have been the employment situation and what might have been a correct monetary policy if we had achieved a real peace.

The postwar period.—Actually the postwar situation has been quite different. On the domestic side, consumer demand proved to be extremely strong, and the businessmen proved to be quite venturesome in investing in plant and equipment in order to meet consumer demand. On the international side, the war never really came to a close, and more recently has been regathering momentum. Between these two influences, total demand has been kept at a high level ever since the end of the war. In the early years the domestic influences were more important, but at the present time the international influence has become dominant.

The postwar period has been characterized by a policy of more or less easy money. Many persons would leave out the "more or less" and simply say that it has been characterized by an easy-money policy. Since the conditions of the postwar period have been so obviously different from those of either the prewar or the wartime periods, the

easy-money policy had to have different reasons also. This brings us to the most interesting part of our subject matter.

Monetary policy in the early postwar period was heavily influenced by the pessimistic forecasts of post V-J Day unemployment. Even those persons, including myself, who did not go along with the pessimistic forecasts were still very much concerned about blasting the delicate bud of reconversion.

As the true character of the postwar period became apparent, more soul searching was required if one were to continue to support an easy-money policy. By and large, I believe that such a policy—one of about the same degree of intensity as the one actually established by the sometimes joint and sometimes several actions of the Treasury and the Federal Reserve System—was justified by the surrounding circumstances; although, I believe that a much stronger policy would have been justified in several fields not subject to Treasury or Federal Reserve discretion. I shall give my reasons for this belief. But, before I do so, I want to make it amply clear that the reasons which I shall give are entirely my own, and that I do not and cannot speak for anyone in authority.

Reasons for low long-term interest rates in the postwar period.—First, I believe that the American economic system has powerful antibodies acting against inflation and much weaker antibodies acting against unemployment.[2] Our propensity to save is high and our stocks of capital are large. We have never had an important inflation except as a consequence of war.

Before the war, Great Britain, some of the self-governing British Dominions, and a few of the countries of western Europe approached the United States in this differentially greater protection against inflation than against unemployment due to the inherent nature of their economic and social systems. But, even before the war, this characteristic was much more pronounced in the case of the United States than in that of any other country. Since the war, the United States (and possibly Canada) stand alone in this respect. In most of the countries of the world—particularly in underdeveloped countries—the reverse situation has always prevailed, and the natural antibodies resistant to inflation have always been weaker than those resistant to unemployment. I should like to emphasize, therefore, that what I say about postwar monetary policy in the remainder of this paper applies to

2. This statement refers only to factors affecting total demand. It is recognized that prices may be increased substantially at any given level of total demand by combinations of workers or businessmen and that such increases will result in unemployment. It is not implied that it is the business of fiscal or monetary policy to cure such unemployment. Such an attempt, indeed, could bring about a continuous price rise without determinate limit.

American conditions only, and cannot be applied without drastic change to other economies where different conditions prevail.

Second, a restrictive monetary policy, that is, one which is sufficiently restrictive to be really effective, has extremely disruptive effects on the capital market. If Victory bonds were put on a 3 per cent yield basis they would sell at 92; if they were put on a 4 per cent yield basis they would sell at 78. Based on historical precedent, corporate obligations would do far worse. Such effects, disruptive though they might be, nevertheless would be justified if the authorities believed that they could foresee a substantial period ahead in which a relatively free money economy would prevail and long-term interest rates based on 2.5 per cent long-term government bonds would result in an inflationary volume of capital formation. I do not believe, however, that such a monetary policy would be justified in order to fight what was conceived to be a short period of inflation. This is partly because I do not believe that the severity of the immediate impact of the disruptive effect would be justified, and partly because, after the inflation was over, the remembrance of such a violent decline in the prices of fixed-interest bearing securities in the near-term past would greatly complicate the problem of encouraging an adequate volume of capital formation and so averting a subsequent period of depression. Investors have long memories and it is best, if possible, that they should be happy ones.

I have already noted that no one knows what might have been a correct monetary policy if the war had really come to an end. During the early part of the postwar period, when the prospects of a real peace seemed somewhat brighter than they seem today and the factors sustaining total demand came primarily from the domestic side, the authorities were inhibited, quite properly, I believe, from imposing a more drastic monetary policy by the belief that the period of inflation would be short and might soon be succeeded by a period in which capital formation should be encouraged. Under these circumstances it seemed appropriate to fight the presumedly brief postwar inflation by means other than monetary policy.

An important exception to this general principle should be noted, however. I believe that it would be possible to make effective use of monetary policy in fighting even a short inflation if interest rates were increased with an official guaranty that they would be reduced later. A moderate increase in long-term interest rates, and a still more moderate decline in long-term bond prices, might be effective for this purpose since it would be easier to secure the postponement of capital formation to a period at which it were known that interest rates would

be lower than to choke it off by high rates that were expected to continue. It is only by some such type of procedure that monetary policy could be adapted to fight a *short* period of inflation without undue disruption of the capital market and without impairing its ability to promote economic stability following the inflation. In the event of recurrence of expectations of the type general in, say, 1946 and 1947, I believe that the adoption of such a policy would be desirable. It would involve substantial changes in debt management techniques, however, and was never seriously considered by the authorities at that time.

Today the situation is somewhat different. Under today's conditions, the prospect of a long period ahead in which a free money economy will prevail and during which a long-term interest rate structure based on 2.5 per cent long-term government bonds would be inflationary seems more remote than ever. If real peace should break out, 2.5 per cent might be the "correct" rate for a perfectly free economy. At least, the chances that this would be the case are sufficiently good so that it would be unwise to force long-term government bonds to a substantial discount before trying it. If, on the other hand, the international situation grows worse, we may have to finance a war; and it would be poor fiscal preparedness to throw the government bond market into a tail spin in anticipation of such an event.

Third, in the opinion of a large number of close observers of the government bond market, a small increase in the long-term rate of interest above 2.5 per cent would have been impracticable. Rightly or wrongly, a large proportion of holders of long-term government bonds had come to set great store by a support price of par. A support price of, say 99 or 98, therefore would not have commanded nearly the same degree of investor confidence as did a support price of par, and it would have been necessary for the support to have purchased a great many more bonds. This, of course, is not an argument against raising long-term interest rates if a substantial rise had been economically justified. It is merely a statement that a policy of gradualism would probably have been impracticable; the rise either had to be a worthwhile one or not made at all.

Fourth, the American capital market is, in fact, highly compartmentalized and the scope of general monetary policy is rather limited. I have already expressed the view that little can be hoped for from higher interest rates to stimulate saving. They can be helpful only in checking excess capital formation. Let us review realistically what can be hoped for in this connection:

About one-half of all outstanding debt is that of the federal gov-

ernment. Nothing can be hoped for from raising interest rates against the government. The government's deficit (which corresponds schematically to capital formation) is determined by other factors than interest rates. Actually, the federal government ran a substantial budgetary surplus during part of the postwar period and a cash surplus during most of it.

The next most important use of credit is for housing. I believe that housing credit has been much too easy during the postwar period and has contributed to inflationary pressures. But this is principally because easy housing credit and low housing rates of interest have been expressly promoted by agencies created for that purpose. The obvious remedy is to cease the promotion. If that does not prove sufficient then, and then only, is it time to talk of hardening housing credit by means of a tight general monetary policy. As long as the specific promotion continues such talk is nonsense.[3]

Another large use of credit is for instalment sales and consumer loans. Here the rates charged the consumer are so high that the cost of funds to the lender is a relatively minor item, and it would continue to be relatively minor even if the cost were greatly increased. The remedy here is obviously something of the type of Regulation W, bearing directly on the terms of the loans to the consumers.

It appears, therefore, that general monetary policy is not very effective in reducing borrowing by the federal government, or in the fields of housing and consumer credit. It is likewise very ineffective with respect to all internally financed capital formation, whatever the character of the final capital goods. Also, it should be noted that the interest rate most appropriate to internally financed capital formation is the earnings rate on common stocks taken at their market prices, and this rate has been high throughout most of the post war period.

There remains, of course, a very considerable field—although a distinct minority of the whole—in which general monetary policy can be effective. But, here we run into the principle of marginality. In order to be effective in this narrow area, monetary policy must increase interest rates all across the board, including the interest on the public debt. It is simply a question of costs and returns. The interest on the public debt is already running at the rate of nearly $6 billion a year. There is nothing sacred about this figure. But tax money is extremely hard to come by, and we should be positively sure that we are getting our money's worth before we spend it.

In summary, my fourth point in favor of the postwar policy of low

3. Despite the changes made in the regulations of the federal housing agencies in the fall of 1950, the net impact of federal intervention in the mortgage field is to ease rather than to tighten the terms on which money can be borrowed for housing purposes.

long-term interest rates is that a tighter monetary policy would have been effective over only a minority of the whole field of capital formation and that it would not have been a good buy at what it would have cost.

My fifth point is the rather special one that immediately after a great war a large proportion of all capital formation consists of backlog projects of a much higher than average degree of urgency. Such projects are less sensitive to interest costs than the general run of peacetime capital formation. This is another reason why the results of a tight money policy in the postwar period might have been disappointing, at least to those who count the costs.

Short-term interest rates.—Thus far I have spoken of a "tight-money" policy solely in terms of higher long-term interest rates. Consequently, nothing I have said has any bearing on any controversy between the Treasury and the Federal Reserve System, since, at least as far as the published record goes, there has been no disagreement between these agencies for quite a number of years with respect to the long-term rate of interest.

I shall now turn briefly to proposals for higher short-term interest rates. Even here, however, my remarks are not intended to be directed to the recently publicized Treasury-Federal Reserve controversy on short-term rates, as the differences between the rates proposed by the Federal Reserve and by the Treasury during that controversy were small enough to fall through the rather wide mesh of a general appraisal paper of this type.

What, then, can be expected from higher short-term rates without any change in long-term rates?

Higher short-term rates would have some direct effect in discouraging capital formation, but not a great deal as this is related primarily to long-term rates.

In the case of a domestic boom, higher short-term rates would also serve as a warning to the market, expressed in a form which it could readily understand, and might cause many projectors of capital expenditures to draw in their horns. But such a warning is not likely to be very effective at the present time, because the existing international situation is generally interpreted as a sure insurance that domestic business is not likely to recede because of a deficiency in total demand.

Under present circumstances, I believe that the most important thing which would be accomplished by an increase in short-term rates is that it would increase bank earnings and so make the banks somewhat less avid in pushing new loans. But its effect in this direction

would tend to wear off as banks became accustomed to the new level of earnings and again tried to better it.

The thing which can be stated with most certainty about an increase in short-term interest rates is that it would cost the federal government a considerable amount of money. Here again, we come to the question of costs and returns. And, here again, under present conditions, I doubt if a substantial increase in short-term rates would be worth what it would cost.

I have now given my reasons for approving with some qualifications of the easy-money policy of the United States during the postwar period. They have none of the beauty, symmetry, and logical simplicity of the review of the interest rate theory of a quarter of a century ago with which I began my paper. Rather they may seem a series of expedients; as Nanki-Poo says in *The Mikado:*

> A thing of shreds and patches
> Of ballads, songs and snatches

But, patchwork though it may be, I believe that our present monetary policy is better suited to our times and to our country than the finer graces taught in the schools.

THE IMPACT OF LOW INTEREST RATES ON THE ECONOMY

LESTER V. CHANDLER
Princeton University

AS YOUR CHAIRMAN HAS stated, this paper will deal with "The Impact of Low Interest Rates on the Economy." Since it is impossible to treat all aspects of this broad subject exhaustively in forty-five minutes or less, my remarks will be confined to the most important aspects of the problem. I shall deal with the liberal monetary policy which has assured a highly generous supply of money as well as the maintenance of low interest rates since World War II. I shall discuss only those effects of easy money which appear to have exerted the greatest influence on Federal Reserve and Treasury policies during the postwar period. Even some of these topics will have to be treated quite briefly.

To this audience it is unnecessary to describe at length the nature of the postwar easy-money policy or to analyze in detail the various methods employed to effectuate that policy. It will, however, be useful to recall briefly, as a background for our analysis, certain characteristics of that policy. The following facts are basic for this purpose.

1. Interest rates were not kept down through legislative or administrative fiat limiting the rates that might be paid or charged. They were kept down by permitting an easy expansibility of the money supply to offset increases in the demand schedules for money and credit.

2. Open-market operations by the Federal Reserve constituted the principal method employed to prevent yields on Governments from rising above the levels set by the Treasury and the Federal Reserve. In effect, the Federal Reserve passively purchased all federal securities that others were unwilling to hold at the officially determined yield structure. To the extent that it was committed to an inflexible yield structure, the Federal Reserve surrendered control over the volume of bank reserves. This is not to say that Federal Reserve purchases of Governments were the only active factors tending toward easy money in the postwar period. Also important were the immense accumulation of idle balances carried over from the war period, and the sizable gold inflows. Yet it is still true that the policy of maintaining low interest rates prevented the Federal Reserve from taking more positive actions to limit the money supply.

3. So long as Federal Reserve open-market policy was bound to the objective of holding down yields on governments, the effectiveness of other traditional instruments for general monetary restriction was greatly reduced. Discount rates above the yield rates on short-term Governments could not be very effective, even through their psychological effects, so long as banks and others had enormous amounts of short-term Governments that they were free to sell to the passive Federal Reserve in exchange for newly created reserve money. And increases of member bank reserve requirements could be restrictive only to the extent that banks and others were reluctant to part with a small percentage of their government holdings to restore and even to enhance their lending power. In a similar way, the passive open-market policy nullified to some extent the anti-inflationary influence of Treasury surpluses in 1947 and 1948. As the Treasury used some of its surplus to reduce bank reserves, the banks could easily replenish their reserves by selling Governments to the Federal Reserve. And the continuance of easy money encouraged private deficit financing which tended to offset the government's current surplus.

4. Though the immediate effect of this policy was to prevent, or at least to limit narrowly, the rise of yields on Treasury obligations, the almost inevitable accompanying effect under the circumstances was the assurance that money for private purposes would be easily available in large quantities at low cost. Banks and other private investors held about $200 billion of Treasury obligations and were completely free to sell these securities and make loans to private borrowers whenever advantageous to themselves. It was inevitable that they would do that as long as the business outlook continued to be highly favorable. Under these conditions, interest rates on private loans could rise very little relative to the current yields on governments, and the availability of credit for private purposes could not be curtailed very much.

5. Interest rates in the postwar period have not been very low on the average, as compared with any other prosperous period in our history, but they have also been unusually inflexible around that low level. From 1942 until mid-July of 1947, the yields on short-term Treasury obligations were kept almost completely constant, and the range of yields on the longest-term marketable issues was between 2.1 and 2.48 per cent. Then from July, 1947, to August of this year, the range of yields was from $\frac{3}{8}$ of 1 per cent to 1.2 per cent on bills, from $\frac{1}{8}$ of 1 per cent to 1.25 per cent on certificates, and from 2.25 to 2.48 per cent on the longest-term marketable bonds. It is this very narrow range of flexibility, as well as the low average level maintained in the postwar period, that I shall criticize later.

6. Finally, the postwar policy not only maintained low interest rates, but also created a strong belief that interest rates either would not rise at all in the "foreseeable future," or that any such rise would be strictly limited. Both Treasury and Federal Reserve officials repeatedly stated that for the "foreseeable future" the yield on the longest-term marketable governments would be prevented from rising about 2.5 per cent; they voiced their strong opinion that short-term rates could be raised very little, while the longest rate was held at or below 2.5 per cent. Under these conditions, only those who were the most skeptical of official pronouncements had reason to withhold loans for fear of market increases of interest rates in the future. This induced belief in the continuance of low interest rates for the foreseeable future must have done much to enhance the availability of money at low interest rates for private as well as public purposes.

Such were the principal characteristics of the post-war easy-money policy. Why was this policy continued in the face of the postwar inflation? The justifications most frequently set forth in official pronouncements fall into three general categories. First, continuously low interest rates facilitated Treasury finance. They held down interest charges on the national debt, facilitated refunding operations, and protected government credit from the deleterious effects of falling bond prices. Second, stable low interest rates protected the capital position of investors, especially banks and other financial institutions, by holding up the prices of long-term fixed income securities. And third, the easy-money policy facilitated the postwar reconversion, and promoted high levels of production and employment without adding significantly to the extent of the inflation.

I shall devote most of my remaining time to the impact of the easy-money policy on the level of employment and output, and on the extent of the postwar inflation. This will be done primarily because I think this is the most important impact of the easy-money policy on the economy, and not necessarily because I believe that this, rather than the impact on Treasury finances, was the dominant reason for continuing the easy-money policy.

Running through the official defenses of the continuous easy-money policy, one finds this kind of argument: Moderate increases of interest rates would do little to retard inflation, while increases large enough to be effective for this purpose would not only have unacceptable effects on debt service charges and on the prices of fixed income securities, but might also throw the economy into a tail spin. If one accepts this line of reasoning, he will probably conclude that a moderately restrictive monetary policy is not worth while, and that a

more highly restrictive policy is too dangerous to be attempted. In my opinion, both this reasoning and its conclusions are erroneous. I cannot accept the proposition that there is no middle ground between a monetary policy so easy that it feeds inflation and one so restrictive that it produces serious unemployment. Moreover, I believe that a restrictive monetary policy that produces only moderate increases of interest rates can exert a considerable anti-inflationary influence. This is, of course, directly contradictory to the view that moderate changes in monetary policy have little effect on the rate of spending for output.

Most of the current literature emphasizing the ineffectiveness of monetary policy as a stabilization device seems to be based on the following propositions: (1) Monetary policy exerts its influence exclusively through its effects on interest rates; it has no other means of influencing the economy. (2) The height of interest rates has no effect on the propensity to save, or if there are such effects, their direction is not known. (3) The demand for investible funds is highly interest-inelastic. The conclusion, therefore, must be that since changes in interest rates have little effect on either the propensity to save or the inducement to invest, monetary policy has little effect on the level of national money income or on price levels. This line of reasoning, which first equates monetary policy with interest rates and then looks only at the effects of interest rates on the propensity to consume and on the cost of investible funds, is so overly narrow and incomplete as to be seriously misleading. It is not an adequate description of the *modus operandi* of monetary policy.[1]

I shall now offer a few criticisms of this narrow view, and suggest a more nearly complete list of the various ways in which the transition to a more restrictive monetary policy influences the rate of spending.

An adequate account of only the direct immediate effects of the

1. Many writers who are skeptical as to the efficacy of monetary policy have cited the results of the 1938 Oxford study, which concluded that interest rates have little effect on entrepreneurial decisions. But H. D. Henderson, who participated in the study, warned that too much should not be read into the findings. "... It would be very rash to infer that the importance of the rate of interest in the working of the economic system has been exaggerated. The economists' presumption that great importance must attach to a factor so fundamental as the rate of interest remains, and should not be lightly dismissed. What emerges is that the role played by the ordinary business man in the transmission of interest rate changes is an essentially passive role. The active agents must be looked for elsewhere; and the directions in which they may be found have already been indicated. Possibly the suggestions conveyed by the general trend of economic analysis in the past have underestimated these other effects of interest changes as much as they have overestimated the direct reactions upon the ordinary business man." "The Significance of the Rate of Interest," *Oxford Economic Papers* (October, 1938), p. 10.

transition toward a more restrictive monetary policy must include all of the following impacts:

1. The interest-elasticity of the propensity to save. I can contribute nothing to our generally unsatisfactory knowledge concerning the responsive which the propensity to consume and save may make to changes in interest rates.

2. The cost-effects of interest rates on investment. I am inclined to accept the current view that a considerable part of public and private investment, though certainly not all of it, is interest-inelastic *when and only when* two assumptions are valid: First, the state of expectations remains unaffected, and second, the change in interest rates represents the only change in the availability of investible funds. But it is invalid to assume that either of these remains unaffected by a shift in monetary policy. Both the state of expectations and the non-interest aspects of credit availability are affected by current and prospective monetary policy, and to a significant extent. The following points will indicate the nature of these effects.

3. The impact on expectations regarding the profitability of capital expenditures. Monetary policy exerts a more than negligible effect on the expectations of potential spenders for capital purposes, on the position of their demand schedules for investible funds, and even on their willingness to spend currently the money already in their possession. The monetary policy actually followed in the postwar period was admirably suited to the task of raising expectations as to the profitability of new investment. In effect, this policy said to everyone: "Formulate your plans with a high degree of assurance that the continued expansion of over-all effective demand will not be retarded by any significant rise in the cost of new money or any significant decrease in its availability; there will be no scarcity of money to impede the inflationary boom." But if the easy-money policy had been modified and the monetary authorities had made clear, both by overt actions and public statements, that they were going to restrict the inflationary process, spenders for capital purposes would no doubt have viewed the future with more caution, and this would have been evident in the market by somewhat lower demand schedules for investible funds and a greater caution in the expenditure of funds already in the possession of the potential spenders for capital purposes.

4. Credit rationing by the banking system. Banks adjust the volume of their outstanding credit not only by changing the interest rates that they charge, but also through various credit-rationing devices. Actually, under the monetary policy followed in the postwar

period, banks had no reason to ration credit in a restrictive manner. To whatever extent they wished to add to their reserves and lending power, they sold government obligations to the Federal Reserve, and the cost of such reserves was kept very low. But if the Federal Reserve had further increased the cost of reserve funds, and had indicated by other overt actions its reluctance to enhance bank lending power, the banks would not only have raised their interest rates on loans, but would also have been induced to ration credit more restrictively. This tendency toward tighter credit rationing would have been intensified by other effects that I shall now mention.

5. The effect of monetary policy on the prices of longer-term fixed income securities. The postwar policy of holding long-term yields within very narrow limits had the effect of stabilizing the prices of long-term governments at or close to the prices at which most of them had been acquired by their holders. These holders, therefore, could sell their governments and make private loans without realizing more than a small capital loss, and many could actually realize a capital gain. But if the prices of these securities had been allowed to decline even a short distance below par, at least some of their holders would have been more reluctant to reflect on their books the capital losses that would have resulted if they had sold the securities in order to make private loans. Thus, the availability of loans to private borrowers could have been reduced by permitting some decline in the prices of governments.

6. The impact of the transition to a more restrictive policy on lenders' expectations as to the course of business and the future course of interest rates. The actual postwar policy tended to increase the availability of credit by causing lenders to estimate risk at a low level. In forecasting the future course of business and the creditworthiness of particular borrowers, lenders were assured that the boom would not be seriously threatened by monetary restrictions. Lenders could also proceed with a high degree of assurance that any rise of interest rates in the foreseeable future would be quite limited. But the transition to a more restrictive monetary policy could have altered this situation. With the new turn in monetary policy, lenders would have been less confidently optimistic about the business outlook and induced to scrutinize loan applications more critically. This would have applied especially to the more speculative types of loans.[2]

2. Assuming that monetary policy operates solely through changes of interest rates, Alvin Hansen has argued that a more restrictive policy injures "vital industries" without curbing speculative activities. "In a pronounced boom it is the speculative activities that ought to be clubbed down—not the ordinary run of stable industries. The former, however, make extraordinary profits. Any increase of interest hits the vital industries;

The newly created uncertainty as to the future course of interest rates would also have made lenders more reluctant to commit themselves to new long-term loans. Witnessing a decline in the prices of outstanding long-term obligations, they would have viewed new issues with more caution. This change in attitude would probably have extended to investment bankers, who would have sought out new issues with less enthusiasm and might have counseled their clients even to postpone some issues and reconsider their plans for capital expenditures.

7. The effect of monetary policy on the tendency of lenders to "reach out" for earnings. Under the easy postwar monetary policy, some classes of investors felt "starved for earnings." For example, bankers felt that their earnings were too small to enable them to make desirable additions to their capital accounts and to pay satisfactory dividends to their shareholders. Insurance companies also found it difficult to earn the 3 per cent return guaranteed in many of their outstanding policy contracts. Therefore, they felt impelled to reach out for the higher yields on private obligations wherever the risk was not excessive. This enhanced the availability of credit for private purposes. But a higher structure of interest rates in general, and especially higher yields on governments, might have reduced this tendency to "reach out for yields," thereby reducing the availability of credit for private purposes.

8. The last direct impact of monetary policy on the rate of spendings that I shall mention is the effect on consumption spending through the effect on capital values. It now seems to be generally accepted that the propensity to consume is influenced by the behavior of asset values. To the extent that the continued easy-money policy held up the capital value of fixed-income assets, and perhaps also of equities, it probably tended to hold up the propensity to consume. Conversely, any fall of asset values brought about by a restrictive policy would have tended to hold down the propensity to consume.

Let me now summarize my argument up to this point. When the monetary authorities decide to abandon an inflexible easy-money policy and work toward a policy of restriction, they do various things to decrease bank lending power and to change the expectations of the entire economic community. To assume that monetary policy operates only through changes in interest rates, and that these

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but affects hardly at all the high-profit speculative ventures" (*Financing American Prosperity* [New York: 1945, Twentieth Century Fund], p. 251). But to the extent that a more restrictive policy decreases enterprisers' optimism as to the future course of business and profits and causes lenders to estimate risks at a higher level, the results may tend to be the reverse of those envisaged by Hansen.

changes exert their influence only through their effects on the propensity to save and on the cost of investible funds, is to misunderstand the *modus operandi* of monetary policy and to understate its effectiveness for anti-inflationary purposes. It is true that such restrictive effects cannot be achieved without some rise of interest rates, but it is not true that the restrictive effects are achieved solely through the rise of interest rates and their impact on the cost of investible funds and the reward for saving. A list of only the direct and immediate effects of a more restrictive monetary policy must also give due consideration to the direct effects on enterprisers' expectations as to the profitability of new investment, to credit rationing by banks as reserve supplies are made more costly and less available, to the effect of decreased government security prices on the willingness of investors to sell them and make private loans, to the effect on lenders' expectations as to the safety and liquidity of private loans, to the generated uncertainty as to the future of interest rates and security prices, to the effect on lenders' incentives to reach out for private loans in order to increase their earnings, and to the effects of changes in security prices on the propensity to consume. When all these impacts are taken into consideration, the effectiveness of a monetary policy that produces only moderate increases of interest rates is seen to be considerably greater than one would expect if he looked only at the cost effects of the rate increases.

But even this expanded list of immediate and direct effects of a restrictive monetary policy does not tell the entire story. Those who minimize the importance of monetary policy and argue for the superior efficacy of fiscal policy usually support their position by pointing not only to the immediate direct effects of fiscal actions, but also to the multiplier, accelerator, and even tertiary reinforcing effects. Any direct and immediate effects of a restrictive monetary policy will also set into operation the various types of multiplier effects, and they will operate in an anti-inflationary direction by reducing consumption and investment expenditures.

If this analysis is correct, the transition toward a more restrictive monetary policy which produces only moderate increases of interest rates will exert a much greater anti-inflationary effect than would be expected from the cost effects of the rise of the interest rate structure. I believe that the monetary policy actually followed in the postwar period did encourage the inflation and magnify it in no small degree, not only by holding down the cost of investible funds, but also by encouraging the generally bullish attitude and by encouraging lenders to make credit highly available at those low interest rates.

Moreover, I believe that a more restrictive policy which would have produced only moderate increases of long-term interest rates but somewhat larger increases of short-term rates, would have diminished significantly the extent of the inflation, and could have done so without any serious effect on employment and production.. In fact, it is far from certain that the further rises of expenditures for output that occurred in 1947 and 1948 tended to increase total real output. Inflation itself can lower the efficiency of the economy by inducing inventory hoarding and interrupting the smooth flow of supplies, by generating laxity in both management and labor, and by enabling relatively inefficient firms not only to retain the productive resources already under their control but also to expand their operations. It is surely a mistake to assume that further rises of expenditures after relatively full employment has been reached will add still more to real output.

At this point it may be well to add a word of caution. My task here is not to offer a complete analysis of the postwar inflation; it is only to evaluate the role of monetary policy during that period. I believe that the easy-money policy did contribute substantially to the inflationary process, and that even a moderately restrictive policy could have inhibited the process to a useful degree. But I am not claiming that postwar monetary policy was solely responsible for the postwar inflation, or even that it was the principal dynamic factor. My remarks relate only to the marginal effects of monetary policy, meaning by that the difference that monetary policy could have made during the period. I would not, however, accept the view that other factors, such as the rise of money wage rates, were completely independent of the current monetary policy.

There remains time for only a few remarks concerning the other arguments that were advanced to justify the inflexible type of easy-money policy that was actually followed. The first relates to the argument that the inflexible pegging policy was preferable to a disorderly, panicky market in which government security prices would fluctuate wildly without control. Some officials recalled the decline of Liberty Bonds to the low eighties in 1920 when the national debt was only $26 billion, and pointed to the greater potentialities of panic with a national debt nearly ten times as large. But this argument is beside the point. The Federal Reserve unquestionably had the power to control the fluctuations of bond prices, even if private sales had been very large. Moreover, with only a few exceptions, the critics of the inflexible pegging policy did not suggest that the Federal Reserve should abandon the market to panicky and disorderly movements. Instead, they proposed a considerably wider range of

flexibility for short-term interest rates and a wider, but still limited, range of flexibility of the prices and yields on long-term governments. They certainly wanted the Federal Reserve to maintain an orderly market and to control fluctuations of security prices and yields in a way that would contribute to general economic stability, including general price stability. In short, the officials who implied that the only substitute for the inflexible pegging policy was a panicky and disorderly market were guilty of posing false alternatives. The objections have little relevance to a monetary policy that would produce wider but still limited and controlled fluctuations of both long- and short-term yields.

The argument that it was necessary to hold the prices of government securities at par or better at all times in order to protect "the credit of the government" is equally unconvincing. I had supposed that any debtor, including a national government, could successfully maintain its credit rating by evidencing a willingness and ability to meet promptly all its interest and principal obligations in terms of a money of relatively stable purchasing power. Now it is proposed to add something new: the government should *also* protect its creditors against any rise of interest rates after its securities have been issued. In my opinion, the really serious threat to the government credit is not a restrictive monetary policy to combat inflation; it is the threat of further deterioration of the purchasing power of the dollar—a threat which is intensified by failure to use a restrictive monetary policy, as well as fiscal policy, during inflationary periods.

In my opinion, far too much weight has been given to the argument that a continuously easy-money policy should be followed, even in the face of inflation, in order to hold down service charges on the national debt. In the first place, those advancing this argument usually overstate the magnitude and duration of the increase of service charges that would result from a restrictive monetary policy, which would be limited to inflationary periods. Few proponents of a flexible monetary policy for economic stabilization purposes argue a priori for secularly higher interest rates; they want rates to rise only in periods when that is desirable to combat inflation, and they favor easy money and low interest rates at other times. If basic economic conditions in the future should, in fact, be predominantly inflationary, a large and prolonged increase of service charges on the national debt, indeed, might result from a monetary policy aimed at general economic and price stabilization. But if the future is not predominantly inflationary—if easy money and low interest rates should prove to be compatible with general price stability during much of the time—the

necessary increase of service charges on the debt could be limited to short periods and on the average could be small.

In the second place, however—and this is much more basic—even a considerable increase of interest costs on the debt would be a small price to pay for a monetary policy that would significantly retard a further inflation of prices after high employment levels have been reached. Interest costs on the debt are, of course, transfer and not exhaustive payments. Even if a properly restrictive monetary policy should increase annual charges on the debt by as much as $4 or $5 billion, it should certainly be possible to devise a revenue system that would redistribute this amount of income among the members of the nation with far less inequity than would result from general inflation, and the collection of the additional taxes, which would be 2 per cent or less of the national income, should have less of an adverse effect on the economy than those resulting from the additional price inflation that is encouraged by the continuance of an easy-money policy in the midst of basically inflationary pressures.

I shall conclude with a general comment. The immense growth of the national debt to the point where that part of it in the hands of the public now exceeds $200 billion, equal to about one-half of all the debt outstanding in this country, does, indeed, represent a revolutionary change in the financial environment within which the central bank must operate. For the foreseeable future, the Federal Reserve will probably continue to regulate the volume of bank reserves primarily through its operations in the government security market, and it will continue to control the prices and yields of both short-term and long-term governments. Moreover, interest rates on private loans and the availability of money for private purposes will continue to be dominated by the yields on government securities so long as private investors retain the freedom to shift between governments and other securities at their own option.

Thus the Federal Reserve's power over the entire credit market, both short and long term, is greater than ever before. To the extent that this power is employed to hold interest rates at an inflexibly low level at all times, despite fluctuations in the demand for money, the Federal Reserve must abdicate its control over the money supply. This would do little harm if, in fact, the dominant tendency in the future should be toward chronic deflation with few and short serious inflationary periods. But we cannot be sure that the future tendency will be toward chronic and unrelieved deflation. To the extent that we do have periods in which inflationary pressures dominate, such an

inflexible easy-money policy will encourage and accentuate the inflation.

We canot afford to have our central bank operate as an engine of inflation rather than as an agency for economic stabilization. Therefore, it is highly important that we restore the monetary authority's ability to restrict the money supply in order to combat inflation. I believe that this can and should be done primarily through changing prices and yields at which the Federal Reserve buys and sells government obligations, especially if the Treasury will adjust the types and proportions of its security issues with this objective in mind. But if, after a careful analysis and a weighing of its various effects, this method is still judged to be unacceptable, other methods of restoring an effective control over the money supply should be found, even if this should necessitate placing on banks, insurance companies, and other financial institutions limits on their freedom to shift between government and other securities. I consider such limitations undesirable, but less undesirable than relinquishing control over the money supply.

THE IMPACT OF LOW INTEREST RATES ON THE ECONOMY
(Discussion)

HOWARD R. BOWEN
University of Illinois

WE HAVE HEARD two valuable and illuminating papers on the monetary policy followed in the United States since the end of World War II. The two papers agree on many points but there are substantial differences between them in emphasis and in general judgment as to the soundness of the policy followed. Professor Chandler, whose paper I am to discuss, is, on the whole, critical of this policy. He holds that with only a "moderately restrictive" tightening of credit during the postwar period, the inflationary movement would have been "inhibited to a useful degree." He does not indicate precisely what he means by the phrase "moderately restrictive," but one can infer that he is thinking of policy involving increases in interest rates of the order of perhaps 1 per cent, plus or minus. One gains the impression that he is surely not thinking of increases of several percentage points or of an adjustment of interest rates to the returns earned on business investments.

I am inclined to agree that a somewhat tighter credit policy might have contributed in a minor way to the control of inflation during the past five years. At least, I think that such a policy would not have caused serious harm. But, like Professor Chandler, I express this view from the vantage point of the present and with the aid of hindsight. If, on the other hand, we view this monetary policy in the context of the legitimate expectations, and the conflicting considerations at the various points in time when it was formulated, I would be willing to argue that this policy was a reasonable one and perhaps the only realistic one.

The postwar rise in prices, or at least the rise in the price indexes, took place almost entirely during the two-year period from the middle of 1946 when decontrol occurred to the middle of 1948 when prices turned downward. Our problem, then, is: could a different and feasible credit policy have appreciably influenced the course of prices during this two-year period? I am inclined to answer this question negatively.

I would argue that the rise in prices during this period was predominantly the result of inflation that had occurred during the war. The price adjustments following decontrol (decontrol occurred before reconversion was complete) were merely recognition of demand-supply relationships that had developed under wartime conditions. These price rises were accentuated by the successive rounds of wage increases occurring during the period from 1946 to 1948.

As we emerged from the war, the public was in possession of enormous quantities of idle money and other liquid assets and was confronted with relative scarcities of goods. Under these conditions, I doubt if a *moderate* credit policy could have had any significant effect. On the other hand, a drastic policy, sufficient to stem the advance in prices, would have involved great risk of sending the economy over the precipice. At the same time, it would have caused serious disorganization in the capital market with unpredictable psychological effects. In my judgment, and I am afraid that judgment is all we have to offer in these matters, the responsible course for the monetary authorities from 1946 to 1948 was to accept the wartime inflation as a given datum and to go on from there. To have tried to undo any significant portion of the wartime inflation would have entailed serious risks.

The policy of the credit authorities was even more defensible in view of the business forecasts of the early postwar period and the general climate of opinion about the long-term economic prospects of the country. Subsequent events have shown that early postwar forecasts were mistaken because they were based upon certain wrong assumptions, especially with regard to the turn of our international relations and responsibilities. But at the time, these wrong assumptions were highly plausible. For the monetary authorities to have disregarded them, would have been highly imprudent.

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